Strategic Plan for Electronic Commerce
Defense Personnel Support Center

PARTNERS IN

ELECTRONIC COMMERCE

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Defense Personnel Support Center

PARTNERS IN

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ELECTRONIC COMMERCE

CUSTOMER SATISFACTION

Contents

Contents (Continued)

Contents (Continued)

Contents (Continued)

Tables

Figures

CHAPTER 1

Introduction

The Defense Personnel Support Center (DPSC) is the principal supplier of military subsistence, medical, and clothing products and logistics services during peacetime and wartime. Historically, we have supported our customers by using DoD's massive buying power to receive substantial discounts on stock that we then hold in our depots until customers requisition it. Thus, by taking advantage of economies of scale, we have been able to provide our customers the material they desire at prices substantially below those they could acquire for themselves. In 1992, our total sales were nearly $4 billion, an amount that placed us well ahead of many of the Fortune 500 companies.

In recent years, several events have occurred that have changed the way we have traditionally done business:

♦ The Cold War ended. Its end resulted in drastic reductions in the Military Forces, our traditional customer base.

♦ The Defense Business Operations Fund (DBOF) was implemented. That action has significantly increased the prices of the items and services that we sell by forcing us to recoup all of our administrative costs in the prices we charge.

♦ Budget cuts have forced our customers to demand faster, more accurate, more responsive service as a way to reduce their own costs.

♦ Competition from other government agencies and the commercial sector has increased significantly. All of those organizations need to set their prices to provide peacetime levels of support only. By contrast, our peacetime prices must also fund wartime support.

Those four events represent a new reality for competing in the 1990s, and adjusting to that reality has led us to begin fundamentally changing the way we conduct our business. In the past, we conducted much of our business on paper with our customers and vendors. That process was slow, prone to error, and expensive. We also assumed that holding inventory in our depots provided our customers with acceptable service and the lowest delivered product/service costs. Customer budget and personnel reductions, however, have led to demands for additional services that will reduce their total local costs for such administrative overhead items as warehousing, contracting, auditing, and invoicing. Finally, we assumed that awarding relatively short-term contracts to vendors on the basis of lowest price would achieve the lowest delivered cost. Today, we realize that our processes and the assumptions on which we operate are not always valid. Like industry, we are now focusing on long-term relationships

with our business partners (vendors), and we use third-party distributors more to give customers what they want, when they want it, and at a price they are willing to pay.

Of all the changes we are making, conducting our business electronically rather than on paper is the most important. Not only will it allow us to replace our old, slow, expensive, manual paper processes, but it will also enable us to fundamentally change the way we do business in all of our functional areas. This document is our strategic plan for implementing Electronic Commerce (EC) business methods at DPSC.

We define EC as the paperless exchange of business information between business partners (vendors) and customers (Figure 1-1). EC comprises various technologies, including electronic mail (e-mail), electronic bulletin boards, electronic funds transfer (EFT), and electronic data interchange (EDI). While each of these technologies has existed and been used by commercial industry and the government for some time, not all have national standards that would allow us to universally implement them in each of the industries in which we do business.
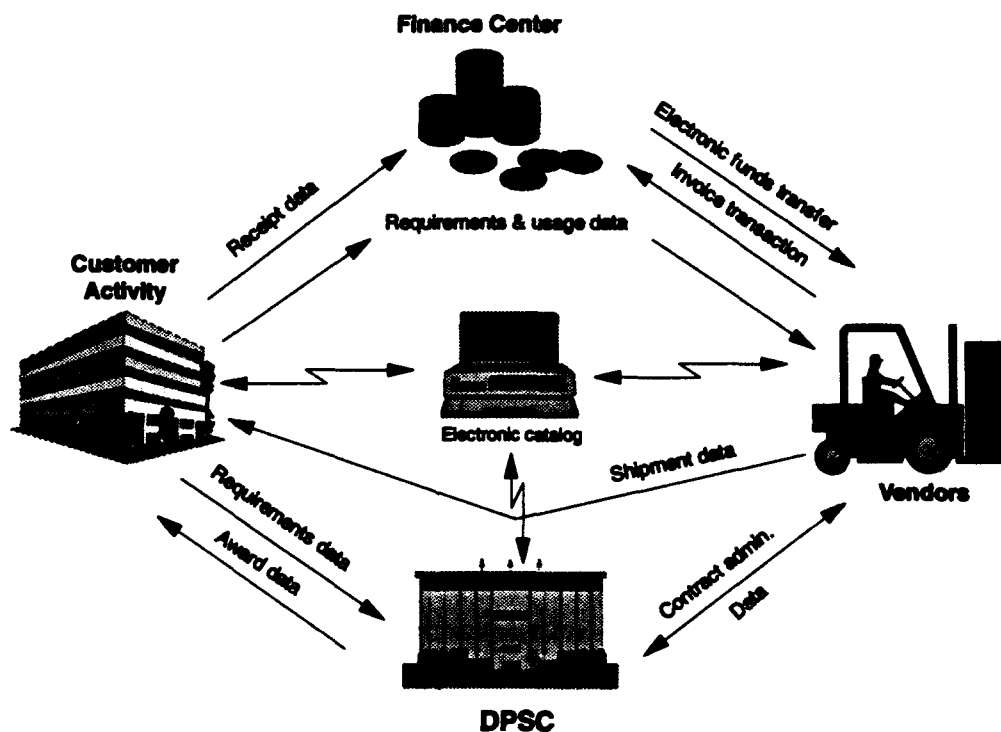
Figure 1-1.
DPSC Electronic Commerce Information Flows

In this document, we focus primarily on EDI, a technology that provides a standard method for passing business information electronically between the computer systems of two or more proprietary information systems. It is widely

used in the private sector and increasingly used by the Federal government. Still in its infancy at DPSC, EDI has already provided us with substantial benefits.

In this document, we describe how we will build on our past success with EDI and implement that technology throughout the DPSC. We discuss our implementation in the context of the business environment in which we must compete, our responsibilities as the Defense Logistics Agency's (DLA's) Functional Application Development and Demonstration Center, and the requirements of Defense Management Report Decision (DMRD) 941, *Implementation of Electronic Data Interchange in DoD.*[1]

The remainder of this chapter explains the purpose of this plan, provides some background information on our EDI program, and describes the organization of the plan. Individuals or organizations with questions about this plan should direct their inquiries to Mr. Dennis Dudek, Director, Electronic Commerce Office, Defense Personnel Support Center, Telephone (215) 737-8482, FAX (215) 737-5624.

PURPOSE

This plan has three purposes. First, its primary purpose is to formalize a process at DPSC for bringing EDI business improvements on-line faster and with fewer resources. Given the technology's impact on our ability to compete in the future, we must reduce the time and cost it now takes to implement EDI initiatives as an important means of becoming more competitive. With limited resources, we must also focus our efforts on implementing those EDI initiatives that are consistent with the achievement of our strategic business vision. We discuss our vision in Chapter 2. In the past, our business units (commodities) have been widely recognized for their individual EDI initiatives. Frequently, they have had to struggle to find the support and funding they needed to succeed. In the process, efforts in one business unit duplicated those in another because the overall program was inadequately coordinated. We intend in this plan to define a process that will better focus our resources on helping all our units define, plan, fund, and implement the EDI business improvements they need.

Second, this plan addresses our responsibilities as DLA's EDI Functional Application Development and Demonstration Center. In that capacity, we have been given broad operational guidelines, and in this report, we describe the policies, procedures, and other initiatives that we will need to fulfill those responsibilities.

The final purpose of this plan is to describe how we are complying with DMRD 941. In DMRD 941, the Office of the Secretary of Defense (OSD) mandated the replacement of 16 paper forms with the electronic transmission of the data on those forms using EDI. While that effort is important and will produce savings, we view those savings as a small part of the total benefit we will derive from EDI. In the final analysis, EDI's most significant contribution to the center

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[1] DMRD 941, *Implementation of Electronic Data Interchange in DoD,* 12 November 1993.

will be as a business method that gives us the means to fundamentally change the way we do business with our customers and our vendors in all our functional areas.

Conceptual Framework of the Plan

In this plan, we describe the context of our framework for EDI implementation; assess our progress to date; and present our guiding principles, goals, objectives, and strategies for the future. We describe the business environment in which we must operate and compete and relate our efforts to specific corporate goals for becoming more competitive. Within that framework, we define our current EDI project portfolio and describe anticipated future EDI efforts. Our strategies are designed to achieve those goals. Following our discussion on strategies, we address our plan of action.

This plan will continue to evolve. As we gain experience implementing EDI business process improvements, we will update the plan to ensure that we remain focused on those efforts that produce the greatest return for our investment. We expect EDI to make us more productive and, therefore, more competitive. The technology will not only allow us to provide our customers more value for their procurement dollars but it will also give us the means to produce that value with lower internal operating costs.

THE PLAN'S AUDIENCES

This plan is written for five specific audiences:

- *Executives*: This plan explains to senior DoD, DLA, and other government executives how DPSC is implementing EDI to become more competitive, to discharge its responsibilities, and to satisfy its DMRD 941 requirements.

- *Business unit directors*: The plan describes to our business unit directors how we will support their future efforts to define, plan, fund, and implement EDI initiatives that will help their organizations compete better in the future.

- *Project coordinators in each business unit*: This plan defines DPSC's policies and procedures for implementing individual EDI projects. Within that framework, we specify coordinator responsibilities for concept development, project funding, technical and other staff support, and progress reporting procedures.

- *DPSC users*: This plan keeps DPSC personnel informed about our transition from manual, paper-intensive business processes to our future electronic business environment. We believe that once our people are informed and understand the technology, our vision, and the level of committed support

we will provide their efforts, they will identify more and more opportunities for applying EDI.

♦ *Trading partners, concerned industry groups, and other non-DPSC organizations:* This plan informs industry and other external organizations that we are very serious about EDI. It explains how and when we will implement it so that those groups will be ready to interact with us in our new electronic, paperless environment on which we are building our future.

BACKGROUND

The DoD has recognized for some time that its manual, paper-intensive business processes were slow, error prone, and expensive. In 1990, it started a program to apply EDI, e-mail, electronic bulletin boards, EFT, and other similar technologies in high-payoff areas. Its EC initiative seeks to achieve the following benefits by building electronic information bridges within the defense community and among DoD, other government agencies, and private industry:

♦ Lower data-entry costs and more accurate information

♦ Reduced mailing costs and faster communication

♦ Less overall paperwork

♦ Improved cash management and better decision making.

To realize those benefits, DoD's EC initiative has as its goal the automation, generation, processing, coordination, distribution, and reconciliation of every business transaction. [2] While EC will provide significant benefits for automating manual processes, a more important benefit is that it provides a fully electronic, fundamentally different business environment in which the Services, Defense agencies, DPSC, and private industry can do business. Because of customer demands for lower prices, higher quality, better reliability, a broader range of service, and budget and force reductions, neither we nor any other defense organization can afford to do business as we did in the past. Information-processing technology is the multiplier needed to improve operating efficiency and mission effectiveness, but DoD recognizes that technology alone will not yield improvements of the magnitude of those needed. We must change the way we do business to realize the full benefits of paperless operation.

DoD Program Management

To secure early and wide-reaching leadership across the DoD as business processes improve and EC capabilities unfold, the former Assistant Secretary of Defense for Production and Logistics designated DLA as the Executive Agent for

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[2] Defense Logistics Agency, *Electronic Commerce: A Strategic Plan for DoD*, November 1990.

EC. Recently, that responsibility was transferred to the Defense Information Technology Services Office (DITSO). DITSO has the following responsibilities:[3]

♦ Ensure compliance with policies and standards

♦ Provide standard implementation guidelines and establish support agreements

♦ Establish and control standard support components for use throughout DoD

♦ Provide common user systems, facilities, and services where appropriate

♦ Promote a single face to industry

♦ Develop DoD-wide strategies for implementing EC.

Role of EDI

Electronic data interchange is DoD's primary technology for achieving its EC business environment. Shipping, automotive, grocery, and other industries have successfully replaced purchase orders, bills of lading, invoices, payments, and other paper forms with EDI transactions. The Deputy Secretary of Defense directed all DoD Components to join the private sector as full partners in these paperless transactions and to make EDI the normal way of doing business by the early 1990s. The program manager confirmed the importance of EDI in the following statement:

> EDI is essential to our plans for streamlining corporate information management, extending total quality management, maintaining prompt payment, and more effectively utilizing our commercial base in support of Defense goals. By standardizing and automating the exchange of business transactions from pre-award through final delivery and payment, EDI opens the door to electronic commerce.

When properly employed, the replacement of paper transactions by EDI promises the following benefits:

♦ Lower data entry and mailing costs

♦ More accurate information

♦ Faster communications

♦ Decreased paperwork

♦ More effective decision making.

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[3]Defense Logistics Agency briefing, *A Partnership With Industry*, by the DoD Executive Agent for Electronic Commerce, 1991.

Studies show that organizations that change their business practices to fully exploit EDI can realize the following additional benefits:

◆ Faster processing of contract actions and prompt payments to vendors

◆ Reduced lead time in logistics pipelines and smaller inventories

◆ Availability of timely and accurate logistics data for decision makers

◆ Lower manpower requirements

◆ A responsive environment that supports just-in-time production, flexible manufacturing, and rapid distribution.

DPSC's Future Business Environment

While DPSC's mission to support the Military in peace and war remains the same, the business environment in which we must accomplish that mission is rapidly changing. In the past, we operated in a semiprotected business environment in which sales were certain and cost recovery factors low. Today, customers do not have to purchase from us, our cost recovery factors are nearly double historic levels, our traditional DoD customer base is shrinking, and competition from both commercial and other government sources is dramatically increasing. At the same time that those factors tend to discourage sales, we must still generate the revenue to maintain an organization that plans to support the Military Services in time of war and then does so.

Each of our three business units (medical, subsistence, and clothing and textiles) operates in an industry that is quite different from the others, and yet, each faces the same business imperatives to stay competitive: reduce inventory, lower costs, increase service levels, and provide higher quality. Our EDI program is designed to give our individual business units the common support they need to implement business process improvements that allow them to operate more effectively within their specific industries.

Functional Application Development and Demonstration Center Responsibilities

On 22 June 1992, the Commander, DLA, designated DPSC as the Functional Application Development and Demonstration Center for EC/EDI. In that capacity, we define and test policies, procedures, and technical solutions for effectively and most efficiently implementing EC/EDI business process improvements throughout DLA. The goal of that function is to eliminate duplication of effort throughout DLA and to reduce implementation times for EDI business process improvements that DLA's commodity management centers need.

Table 1-1.
DPSC Operational Transaction Volumes
(In thousands)

	Medical		Subsistence				Totals	
	Current	Projected	Current	Projected	Current	Projected	Current	Projected
Number of customers	0.3	0.5	0.2	0.6	0.2	0.2	0.7	1.3
Number of suppliers	0.3	0.7	0.1	0.1	0.1	0.3	0.5	1.1
Invoices/month	18.5	52.5	3.5	4.5	0.0	0.0	22.0	57.0
Transaction/invoice	2.0	2.0	1.0	2.0	0.0	0.0	3.0	4.0
Invoice transactions/ month	37.0	105.0	3.5	9.0	0.0	0.0	40.5	114.0
Invoice transactions/ year	444.0	1,260.0	42.0	108.0	0.0	0.0	486.0	1,368.0
Purchase orders/month	9.3	21.0	10.0	22.0	0.4	0.9	19.7	43.9
Transactions/ purchase order	10.0	20.0	1.0	2.0	11.0	23.0	22.0	45.0
Purchase order transactions/month	93.0	420.0	10.0	44.0	4.4	20.7	107.4	484.7
Purchase order transactions/year	1,116.0	5,040.0	120.0	528.0	52.8	248.4	1,288.8	5,816.4
Pricing actions/ month	0.0	100.0	60.0	120.0	60.0	120.0	120.0	340.0
Pricing actions/ year	0.0	1,200.0	720.0	1,440.0	720.0	1,440.0	1,440.0	4,080.0
Point of sale/month	0.0	0.0	0.0	0.0	0.0	10.0	0.0	10.0
Point of sale/year	0.0	0.0	0.0	0.0	0.0	120.0	0.0	120.0
Total transactions/ year	1,730.4	8,221.7	971.3	2,280.2	848.9	1,983.5	3,550.6	12,485.4

◆ *Trnsportation*: Moving personnel, equipment, and supplies; includes planning, authorization, routing, scheduling, and movement. Our depots have traditionally managed transportation, but the contracts we are now letting, such as our prime vendor support contract in medical, increasingly address all aspects of distribution (including transportation) using third-party vendors.

◆ *Supply management*: Providing end items, equipment, and repair parts to customers; includes retail operations, wholesale inventory management, and wholesale storage.

IDENTIFYING EDI OPPORTUNITIES

Our business units constantly evaluate their current operations in each of the functional areas listed above to identify opportunities to use EDI and be more competitive, and they will continue to do so. The following steps comprise our general approach for selecting EDI projects to implement:[4]

◆ Identify project opportunities by determining the effect on business practices, analyzing trading partner capabilities

◆ Set priorities for all feasible implementation candidates by performing economic and mission-impact analyses to assess the costs and benefits of each

◆ Select from among the implementation candidates based on resources available.

Once we choose implementation candidates, we must take the following actions for each project:

◆ Establish a project implementation team and develop a business concept plan

◆ Define the operating concepts; identify data requirements; determine any application system modifications needed; and resolve business, legal, and security issues

◆ Review hardware specifications, identify translation software requirements, establish a telecommunications strategy, and determine facility and resource requirements

◆ Review EDI standards and conventions and develop new or modify existing ones as needed

◆ Integrate and test the system

◆ Establish trading partner relationships and train users

◆ Operate the production system.

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[4]Hardcastle, Thomas P., *EDI Planning and Implementation Guide*, LMI Report DL203RD1, August 1992.

Table 1-2.
DPSC Transaction Volumes and Projected Cost Savings
(In thousands)

Form name, form number, and transaction set number		Medical		Subsistence		C
		Current	Projected	Current	Projected	
Order for Supplies and Services DD form 1155	850	76.50	250.00	20.00	21.00	
Request for Quotation SF 18	840	2.10	2.10	0.20	0.20	
Amend. of Solicitation/ Control Modification SF 30	860			4.00	4.20	
Material Inspection and Receiving Report DD form 250	856	6.40	3.20			
Solicitation Mailing List Application SF 129	838	0.30	0.30	0.20	0.20	
Control Requirement for Progress Payments SF 1443	810, 820					
Freight GBL, CBL, and Public Vouchers SF 1103 & SF 1113	110, 210, 410, 810 820, 858, 859	0.50	0.50	16.30	16.30	
Personal Property GBL, Accounting Services Performance SF 1203, 619/ 611-119-1	858					
Standard Tender MT form 364R	602					

Note: CBL = commercial bill of lading; DD = Defense Department; GBL = government bill of lading; MT = military traffic;

1

Clothing and textiles		Miscellaneous		Totals		Direct cost savings (thousands of dollars)		
Current	Projected	Current	Projected	Current	Projected	Dollars saved per document	Total current	Savings projected
2.30	2.30	76.90	76.90	175.70	350.20	3.35	588.60	1,173.20
0.30	0.30	2.40	2.40	5.00	5.00	3.45	17.30	17.30
0.50	0.50	36.00	36.00	40.50	40.70	3.35	135.70	136.30
		18.00	18.00	24.40	21.20	5.72	139.60	121.30
		4.80	4.80	5.30	5.30	0.94	5.00	5.00
		3.60	3.60	3.60	3.60	1.27	4.60	4.60
1.30	1.30	57.60	57.60	75.70	75.70	3.12		
				0.00	0.00	4.45	0.00	0.00
				0.00	0.00	2.28	0.00	0.00

ic; SF = Standard Form.

2

Table 1-2.
DPSC Transaction Volumes and Projected Cost Savings (Continued)
(In thousands)

Form name, form number, and transaction set number		Medical		Subsistence	
		Current	Projected	Current	Projected
Monthly Report Receipt of Repairables SAV 926					
Product Quality Deficiency Report SF 368	842	2.70	2.70	0.10	0.10
Transportation Discrepancy Report SF 361	842	2.30	2.30	2.00	2.00
Available Fuels Sales Slip DD form 1898	810, 856				
OTHER INDUSTRY-SPECIFIC FORMS					
Government Travel Request SF 1169 DD form 1610 & SF 1164 (sub) DD form 1351, 1351-1, 1351-2C (sub)		1.00	1.00	0.50	0.50
Voucher Stub and Check No form number (All directorates)	Vendor Payee				
Report of discrepancy-supply SF 364	842	32.50	32.50	7.50	7.50

Note: DD = Defense Department; SAV = Standard Aviation Systems Command; SF = Standard Form.

Clothing and textiles		Miscellaneous		Totals		Direct cost savings (thousands of dollars)		
Current	Projected	Current	Projected	Current	Projected	Dollars saved per document	Total current	Savings projected
				0.00	0.00	1.80	0.00	0.00
6.90	6.90	1.20	1.20	11.00	11.00	1.47	16.10	16.10
1.30	1.30			5.60	5.60	1.29	7.20	7.20
				0.00	0.00	1.26	0.00	0.00
0.90	1.00	6.00	6.00	8.40	8.50	1.87	15.70	15.90
		24.00	0.00	24.00	0.00	1.87	44.90	0.00
				100.80	114.00	0.67	67.50	76.40
				70.80	50.00	0.67	47.40	35.50
27.00	27.00	1.20	1.20	68.20	68.20	2.06	140.40	140.40

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Related Efforts

The DoD's largest EDI-related project is the Modernization of Defense Logistics Standard Systems (MODELS). For the past 3 decades, DoD logistics activities have used the Defense Logistics Standard Systems (DLSS) to communicate with each other. The fixed-length DLSS transactions, although transmitted electronically, are not as flexible as EDI formats. By changing both the formats and their supporting procedures, MODELS will fundamentally redesign the internal flow of supply, transportation, contract administration, and billing information between logistics activities. The new system, called the Defense Logistics Management System (DLMS), will meet requirements for additional information, exploit new communications technologies, and provide a foundation for other EDI efforts throughout DoD.

The use of EDI is but one way DoD is improving the way it operates. OSD considers EDI a part of the corporate information management (CIM) initiative that will improve the effectiveness and efficiency of information technology by re-engineering underlying business processes; ensuring data consistency; and building a standard, robust, and nonredundant technology infrastructure. To support the infrastructure development, CIM is restructuring the DoD's information processing environment by replacing Service-unique systems for payroll, logistics, and other support functions with standard applications. This plan follows the CIM philosophy of defining a vision, setting goals and objectives, and developing strategies.

Besides EDI, CIM also includes Computer-aided Acquisition and Logistics Support (CALS). The CALS initiative promotes the paperless exchange of technical information. In many cases, exchanges of technical information complement the business transactions supported by EDI. We see CALS as the potential means for transmitting technical information to clothing vendors.

Another EC- and EDI-related initiative is total quality management. It focuses on continuous improvement of productivity and quality after an organization re-engineers its business processes. It also ensures that new opportunities for EDI are identified as they develop. We have an active total quality management (TQM) organization that complements our efforts to implement EDI business process improvement.

OVERVIEW

Along with this introductory chapter, the information found in the following chapters comprises our strategic plan for EDI:

♦ Chapter 2 provides our conceptual framework for implementing EDI. That framework is based on our vision of business in the future and builds an EDI project portfolio that allows us to achieve a competitive position in that

environment. This chapter also describes a strategic planning process that we will follow to build our portfolio.

◆ Chapter 3 describes how we are managing our EDI program.

◆ Chapter 4 discusses the guiding principles, goals, objectives, and strategies we will follow to maintain and improve our current project portfolio. Goals are broad statements of direction; objectives are more specific steps needed to accomplish the goals; and strategies describe the approach used to achieve one or more objectives.

◆ Chapter 5 provides our initial plan of action and milestones, including current status of each milestone.

◆ Chapter 6, provides a detailed description of our EDI concept of operations at the corporate level and for each of our business units. It also discusses current projects in each business unit.

CHAPTER 2

Implementation Context

This chapter explains the context of our EDI program. That context includes our current business environment, our vision of our future business environment, our responsibilities as the DLA Functional Application Development and Demonstration Center, and the mandates of DMRD 941. We discuss our EDI initiatives within that context and explain how our strategic planning process supports continued project definition to achieve our corporate vision.

CURRENT DPSC BUSINESS ENVIRONMENT

Unlike many other government organizations, we operate in an intensely competitive business environment where our customers are free to buy from best-value sources and where other government and nongovernment sources aggressively vie for the same business. In that environment, we operate at a disadvantage since our competitors set their prices to provide only peacetime support while our prices must also cover the cost of wartime support. In addition to those factors, the DBOF mandates that we recover all of our administrative costs in the prices that we charge. That mandate nearly doubled our cost recovery factor initially and again places us at a disadvantage in the marketplace.

In the struggle to compete for — and win — customer business, we view EDI as an essential business tool that is a crucial element in our corporate success. It will allow us to replace our old, labor-intensive, manual processes and to do business faster, better, and less expensively in ways we could not have imagined a relatively short time ago.

Since EDI applications cannot be developed overnight and must be developed in support of specific business processes, our vision of our future business environment is crucial as a means of focusing our development effort. In the paragraphs below, we describe that vision. When defining our vision, we recognized that each of our business units operates in an industry that is quite different from the others. We also recognized, however, that each of our business units faces the same business challenges to eliminate inventory, lower costs, reduce response times, and increase quality. Satisfying those demands with a center-wide strategy and technological foundation, therefore, makes eminently good sense.

DPSC VISION OF BUSINESS IN THE FUTURE

Intense Customer Focus

Recognizing and fulfilling changing customer needs — as customers define them — will become a predominant effort throughout DPSC. We will become increasingly adept at anticipating, recognizing, and responding to those needs. In general, customers will demand a broader range of services with constantly increasing levels of quality and at lower costs. As customers come under the operational discipline of the DBOF, they will be forced to search for ways to lower their administrative overhead costs. Under that pressure, customers will frequently hold less inventory and order more often and in smaller quantities. We will respond to the customer's need to reduce costs and will tailor our product/service mix to meet that need as an important way of increasing sales.

One of the services we will offer customers is the ability to quickly, easily, and less expensively order material through DPSC for delivery direct from vendors or distributors. That service will allow customers to satisfy their needs without resorting to more expensive local purchasing capability. At the same time, customers will demand a broader range of services such as product and quality management, wartime support guarantees, special distribution methods, and inventory management. They will seek reliability in delivery promises, will look for increased product availability, and will have less tolerance for error. We must recognize these changes and stay ahead of them to survive.

Strategic Use of Information

We will increasingly recognize and use information as a means of achieving a competitive position. We will do this by offering customers real-time information on product pricing, sourcing, specifications, consumption, and availability. Customers will be able to access this information from their computers, use it in their retail logistics systems, quickly locate what they need, and immediately place orders through DPSC for product delivery direct from vendors. When viewing price information, customers will see current, promotional, and future prices so that they can change the timing of their purchases to reduce their product costs. In this new information environment, vendors will maintain a record of their product prices and information on our electronic catalogs using EDI. As we accumulate consumption information, we will use that information to negotiate better product pricing and enhance our ability to forecast customers' needs in peace and war.

Increased Market Analysis

In the future business environment, we will better understand, anticipate, and meet our customers' requirements through more sophisticated and continual market analysis. We will strive to achieve and maintain a partnership with our

customers as their supplier of choice. As their preferred partner, we will conduct continuous market research and analysis to ensure that we are able to satisfy customer requirements by analyzing current usage, discerning new customer requirements, and knowing industry trends.

While most items will come from suppliers with whom we have long-term contractual relationships, we will also have to develop a better means for rapidly procuring items introduced by new vendors or not covered by contracts with existing vendors. That capability must include the capacity to meet sudden or unexpected requirements for a wide variety of items, including specialty items for which routine use may be limited. With the ability to respond quickly to customer needs for nonstandard items, we will position ourselves well as a responsive, viable alternative to open-market local purchasing, an alternative that can reduce customer product costs and administrative overhead.

We will conduct continuous reviews of market trends and developments aimed at offering customers added value as major shifts in technology, distribution, pricing structures, and product use occur. To support that effort, we will provide our employees with rigorous, aggressive, and continuous training programs that help them better understand and detect customer needs. By anticipating rather than reacting to customer needs, we will better position ourselves as the supplier of choice for our customers.

New Contracting Relationships

We will revise our contracting relationships with vendors to acquire supplies in a more timely, inexpensive, and reliable way. In the past, we awarded individual contracts to acquire large quantities of supplies, which were stocked in depots and then distributed to customers on demand. These contracts offered substantial price breaks because large orders reduced vendor costs for inventory, transportation, and handling. In the future, however, vendors will increasingly offer lower prices for products that are ordered frequently and in smaller quantities. They will do that because EDI provides vendors improved manufacturing and distribution as well as flexibility.

Thus, the preferred method of contracting by our commodity directorates will be to rely far more in the future on contracts that call for multiple orders over a fixed contract term. Those contracts will allow money to be obligated for individual orders. They will generally call for shorter production lead times than the individual contracts of the past and will be administered to foster stronger partnerships between the center and our business partners. In that environment, we will share information with our business partners to help them forecast demand, better plan production, identify changes in consumption patterns, and predict new market patterns. In return, the vendors will be required to respond more quickly to orders placed through DPSC for direct-from-the-vendor delivery. Our contracts will be written intentionally to establish long-term relationships with individual vendors that allow them to minimize their risk in an environment of unpredictable demand. Future DPSC contracts will also include

a much broader range of products from individual vendors so that customers will be able to satisfy the majority of their needs from us.

Integration with our suppliers and customers will maximize acquisition flexibility, provide additional value, reduce overhead costs, and ensure the Center's ability to support customers in peacetime and wartime. Speed, value, and consistency will characterize our business transactions. Competition among vendors will be enhanced through increased use of commercial products, and readiness will be strengthened by a broad supporting base for manufacturing and distribution services.

Reliance on Private-Sector Distribution

We will rely far less on depots and far more on private-sector distribution systems to satisfy customers' needs. The increased sophistication, reliability, responsiveness, and cost effectiveness of private-sector distribution systems will result in extensive use of the private sector to satisfy customer requirements at the lowest delivered cost. Under direct delivery and use of distributors, depot inventories will decline. As the reliability and responsiveness of products and services from all sources improve, customers will begin ordering more frequently and in smaller quantities to reduce their local inventories. Manufacturers will increasingly offer better pricing for such orders because they will incur lower order processing costs (from EDI) and achieve production economies from better planning. Where desired by customers and economically feasible, we will offer pre-delivery consolidation of products from distributors to reduce customer receiving costs and inconvenience.

Reliance on the private sector will have other benefits. Shelf life, for instance, will be less of a concern to customers because local inventories will be smaller and will turn over more often; thus, customers will have relatively little inventory that could go out of date. Quantities that do expire will be replaced or rotated by manufacturers and distributors as a condition of the contracts we will negotiate on behalf of our customers. Wartime stocks that were once exclusively stored in depots will be increasingly stored by commercial suppliers on an industrial stock-rotation basis.

Economic Use of Depots

When it is economically advantageous to do so, we will continue to distribute some products from our depots if that distribution meets customer needs. Although we will emphasize direct delivery in our business strategy, depots will still be available and in some cases will prove more economical for the distribution of some of our products. We will need to establish clear rules on how the depots will be used. Our business units' decisions to use depot stockage will be made on the basis of the method that provides the lowest delivered cost to the customer within the customer's required time frames. Where the cost of direct delivery (or delivery through distributors) is equivalent to that of depot support,

direct delivery will be used to encourage the expansion of a competitive direct delivery environment. For wartime surge requirements, business unit directors will attempt first to satisfy projected requirements through commercial contracts, using vendor or distributor resources. Only if that approach is uneconomical will depot stockage be considered to satisfy surge requirements. Our goal will not be to maintain depot capacity but to use the depots in cases in which an economical commercial distribution channel does not exist.

Automate Sales Data at Point of Sale

We will increasingly work with customers to automate the collection of sales data at the point of sale to reduce the cost and improve the responsiveness of the replenishment process. Where possible, we will establish relationships with customers to measure sales at the point of purchase. In other cases, customers will use conventional methods to record inventories on a periodic basis and to report usage over time. Customer decisions on how much to order will for the most part remain with the customer, but we will explore relationships in which vendors automatically and constantly stock customer shelves on the basis of customer-specified reorder levels and visibility of sales data. In all cases, the goal will be to help customers meet their needs with minimum stock levels and reduced costs.

We will use automated data from the customer to refine contract delivery prices and terms and to help customers achieve more effective replenishment routines. Ultimately, costs will be reduced as fewer items are procured locally by the customer and more items are procured centrally by us. We will also share sales data with our vendors to help them better plan their production and distribution schedules and thereby improve their responsiveness to customer needs.

Manage Quality Outcomes

We will change from controlling quality outcomes to managing quality outcomes. We will increasingly discard our philosophy of controlling quality by inspection and adopt an approach that manages the continued improvement in the processes (both internal and vendor) that meet customer needs with increasing levels of quality. In the future, we will manage the provision of continuously improving quality products and services by working with trading partners to mutually improve business processes that provide customer services and products. We will use statistical process controls to measure both trading partner and in-house processes and EDI to transmit data for both. We will also use EDI in the short term to move discrepancy report information. In addition, we will use commercial product warranties to provide customers redress for products that fail to perform as promised.

DEMONSTRATION AND DEVELOPMENT CENTER ENVIRONMENT

To date, our responsibilities as the Functional Application Development and Demonstration Center are very general. We take the view, therefore, that our actions to develop EDI business process improvement applications should ideally consider the entire DLA community and not be parochially suited to only the DPSC environment. That philosophy results in modifications to our EDI implementation efforts to make them more exportable throughout the entire DLA community.

DoD EDI CONTEXT

In addition to our current and future business environment, the context of our EDI program must consider DoD's overall EDI effort. In the following section, we discuss DoD's overall EC vision and the general factors that influence it: mission requirements, operating constraints, and enabling technologies.

THE DoD's EC VISION

The DoD's vision of business in the future is that an increasing amount of commerce will be conducted electronically with industry by transmitting information between the computer systems of business partners. To promote this vision, DoD and industry are establishing telecommunication links and building information system infrastructures. These efforts require information technologies, such as EDI, and changes in business processes. When implemented, EC will allow DoD Components to perfo.m their missions within a budget-constrained operating environment.

Mission Requirements

The DoD is charged to deter war if possible but wage it if deterrence fails. While that mission seems only remotely related to EC, operational units must rely heavily upon government and commercial organizations for support to perform it. Thus, the DoD operational mission requires support organizations to become more effective and productive. They increasingly operate in a constrained, resource-limited environment, providing critical functions such as procurement and contract administration, finance and payment, transportation, and supply management.

Operating Constraints

Most support organizations operate within defined personnel, equipment, and budget authority limits, and recent DoD budget cuts will further reduce

their resources. Because of those cuts and the need to maintain the effectiveness of support organizations, DoD is pursuing several initiatives to improve its effectiveness and efficiency. Many of these initiatives involve technology.

Enabling Technologies

When properly applied, technology can improve productivity and reduce costs. EC-related technologies include any tool used to create, transmit, or process business transactions using electronic rather than paper methods. Automating manual processes alone will yield some benefits, but only with fundamental changes in the way support organizations do business can they maximize the return on technology investments. Operation Desert Storm provides many examples of how operational units can improve effectiveness by working around bureaucratic barriers. EC technologies now provide the capabilities for eliminating a large part of bureaucracy because of their ability to electronically move information faster, more accurately, and less expensively than our paper methods of the past.

Electronic Data Interchange is both a standard and a technology. The American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 approves the formats of EDI messages used by most U.S. industries today. EDI transaction standards tell trading partners how to format electronic versions of paper proposals, purchase orders, invoices, and other business forms. The formats themselves are organized hierarchically into data elements, data segments (groups of data elements), and transaction sets (groups of data segments).

To support the ASC X12 message formats, EDI also requires computer hardware, software, and telecommunications. Trading partners' computers receive, process, and transmit the standard transactions. Telecommunications networks connect these computers, replacing the mail system and couriers as the exchange media (Figure 2-1). DoD trading partners will include other government/non-DoD and nongovernment organizations. Nongovernment trading partners include prime contractors, subcontractors, and suppliers.

DPSC Strategic Approach to Planning

Our approach to strategically planning and implementing our EDI initiatives is driven by our corporate vision of our future business environment. As we previously stated, one purpose of this plan is to ensure that our EDI projects are consistent with the ability to achieve that vision so that we are positioned to compete effectively in an electronic environment. As Figure 2-2 shows, our project portfolio is supported by guiding principles, goals, objectives, strategies, policies, procedures, and resources. Together, these components compose our program for EDI. The relationship of those elements to our business vision is displayed in Figure 2-2.
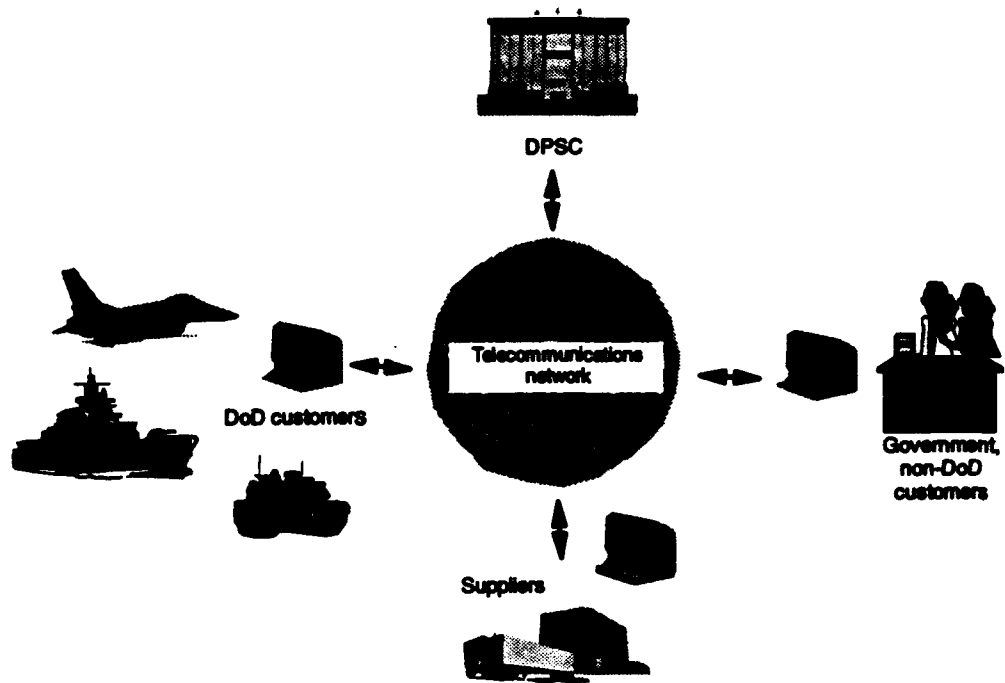
Figure 2-1.
DPSC Trading Partners and the EC/EDI Environment

Guiding Principles

Guiding principles are the philosophical foundations on which we are building and maintaining our EDI project portfolio. Those principles are broad statements by DPSC executives and managers that define the values, concepts, purpose, scope, and direction of implementation for our EDI effort. These statements help us select among different ways to achieve the same goal. Chapter 4 lists our guiding principles for EDI.

Goals

Goals are general statements of the purpose toward which we will direct our EDI program. Goals are realized by meeting specified objectives. Chapter 4 lists the goals for improving our current implementation efforts.

Objectives

Objectives are specific statements of how we go about realizing our EDI program goals. Those objectives support the project portfolio and are met by

applying a particular strategy. Chapter 4 groups our EDI-related objectives by the goals they support.
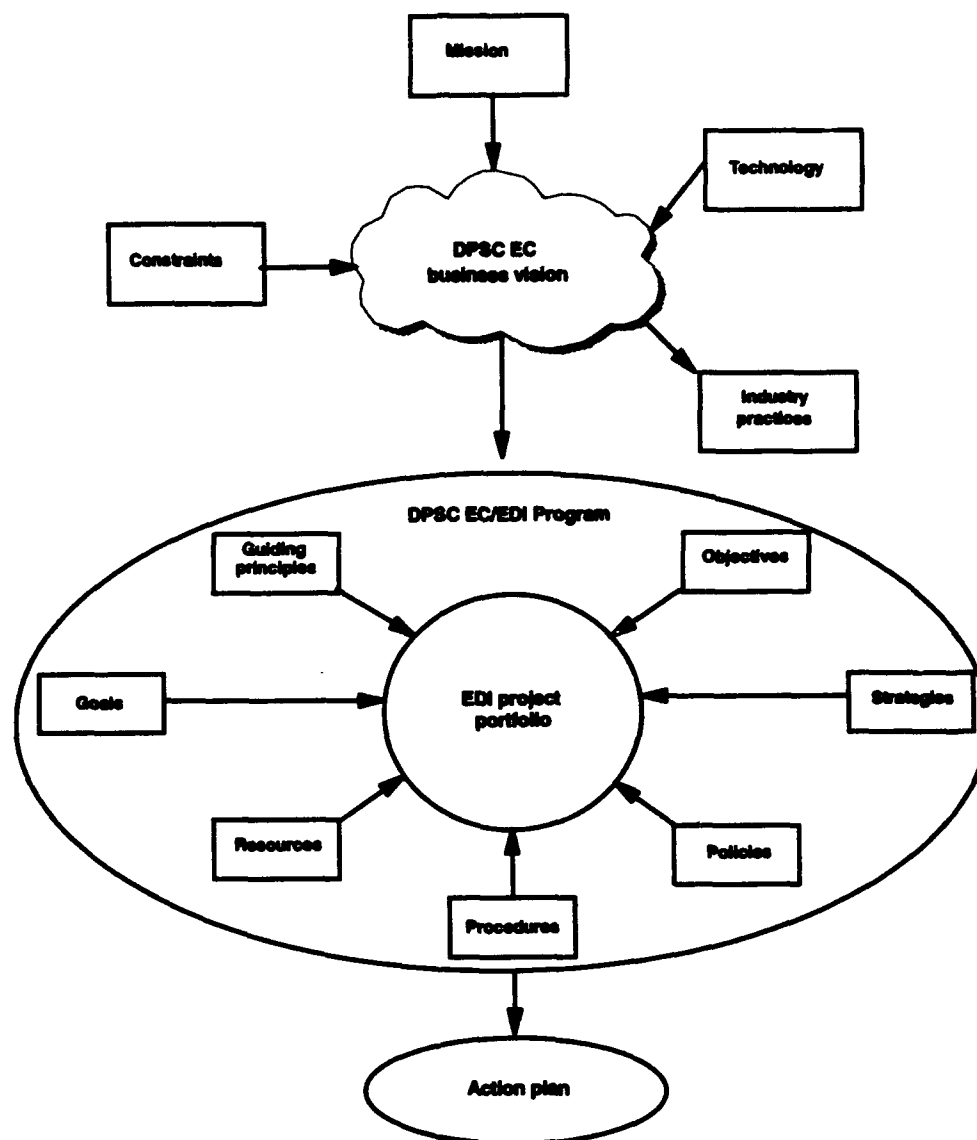
Figure 2-2.
DPSC EC/EDI Implementation Framework

Strategies

Strategies describe the steps we take to attain our EDI program objectives. In Chapter 4, we present several strategies for building and managing our project portfolio. Collectively, our guiding principles, goals, objectives, and strategies

are our overall implementation strategy, which requires policies, procedures, and resources to succeed.

Policies

Policies are directives from our executives and managers that define the ground rules for management and operating procedures. They dictate business processes, management concepts, and organizational structure. Our implementing organizations need policies to guide them as they carry out strategies and manage their individual EDI projects.

Procedures

Procedures are management and operating practices that support the day-to-day activities of our organization. To build and manage our EDI project portfolio, the Chief, Corporate EC Office (CECO) working in conjunction with our Corporate EC Management Council must establish procedures for project management, central oversight and coordination, and cost savings measurement. Each type of procedure is defined specifically in Chapter 3.

Resources

Resources are the people, funds, equipment, and technical expertise that are needed to actually carry out this plan.

EDI Project Management

Individual projects within our portfolio must succeed if we are to achieve our business goals. To ensure those projects succeed, we must provide project coordinators with the proper management environment, resources, and management techniques to effectively plan and execute their EDI projects. In Chapter 3, we describe how our Corporate EC Management Council and staff will provide the support needed to keep projects and project planning on course and on budget. In Chapter 4, we specify those procedures that we must establish to do the following:

◆ Justify project funding

◆ Acquire hardware and software

◆ Train users

◆ Test processes

- Monitor project status

- Measure project savings

- Assure the availability of resources.

ACTION PLAN

Our action plan in Chapter 5 is the list of tasks required to implement our EDI strategies. It describes specific tasks, sets deadlines for their completion, and assigns them to responsible organizations. The importance of the action plan is that it provides us a means to measure our progress. Where we encounter unanticipated roadblocks that slow our progress, we will identify the causes of those roadblocks, learn from them, and eliminate them in the future.

THE STRATEGIC PLANNING PROCESS

The key to achieving the EDI business improvements that we seek is meeting the objectives we have set. Figure 2-3 illustrates a process for managing our EDI initiative from a strategic perspective. Our Corporate EC Management Council will oversee our EDI program and manage this process. The process is a closed loop because the results achieved by our implementing organizations can change our evolving guiding principles, goals, objectives, and strategies for EDI. This feedback ensures continuous improvement by allowing us to capitalize on successful pilot projects. Feedback also makes this strategic plan a living document.

This document completes Steps 1, 2, and 3 of the strategic planning cycle (Figure 2-3). It identifies the context (environment) of our EDI effort, presents strategies for implementation, and provides guidance on future EDI initiatives.

Step 1
Define
environment

Identify operating constraints and survey
available technology

Step 2
Develop
strategy

Re-examine guiding principles, establish
or revise goals, set objectives, and
develop strategies

Step 3
Refine
project
portfolio

Assess current portfolio, identify gaps
and opportunities, develop new projects
and expand successful ones to fill gaps,
and conduct feasibility studies

Step 4
Implement
projects

Develop implementation plans, acquire
equipment, train users, and install, test,
and operate

Step 5
Evaluate
results

Review status reports, analyze findings,
and compare with plan. Consider
successful projects for expansion to
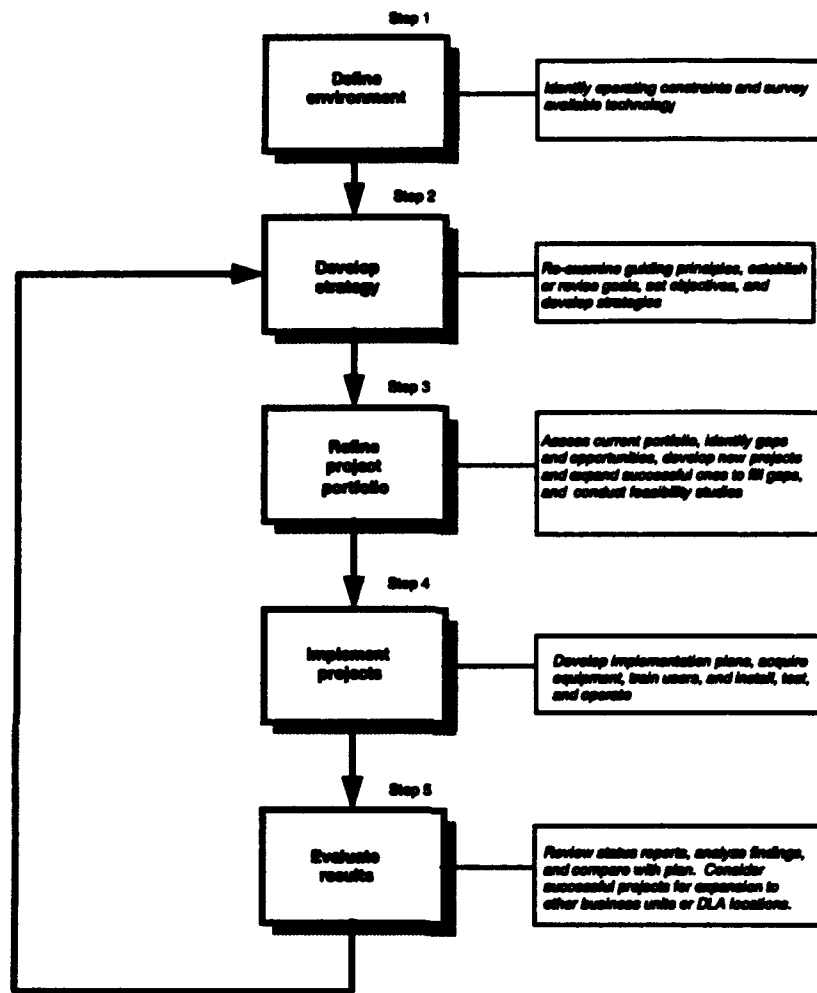other business units or DLA locations.

Figure 2-3.
DPSC Strategic EDI Planning Cycle

CHAPTER 3

Program Management

This chapter describes how we are managing our EDI program. The purpose of that management is to implement EDI business process improvements as quickly as possible and with the least expenditure of resources.

PROGRAM MANAGEMENT ELEMENTS

Consistent with the tenets of our TQM program, the management of our EDI program involves the following elements:

◆ Senior management's definition of a consistent, compelling vision for doing business in the future

◆ Each business unit's constant focus to achieve that vision

◆ Empowerment of EDI project managers in each business unit to bring EDI initiatives on-line as quickly as possible

◆ All level of management's support of EDI project managers to eliminate any roadblocks that fall in the way of completing a project on time and on budget

◆ Encouragement of current manual process holders to seek additional productivity improvements by employing EDI.

DIVISION OF PROGRAM MANAGEMENT RESPONSIBILITY

The following four groups are responsible for managing our EDI program.

◆ *Corporate EC Management Council:* The Corporate EC Management Council comprises the directors of each of our three business units (medical, clothing and textiles, and subsistence); directors of each of the major DPSC staff support offices that influence the implementation of EDI; the Director of the Information Processing Center, Philadelphia; and the Chief, CECO. The Corporate EC Management Council meets monthly and is chaired by the Chief, CECO.

The Corporate EC Management Council is responsible for the following activities:

a. Defining CECO policies and procedures that deal with all phases of EC project development, justification, registration, and implementation.

b. Approving and funding proposed EC initiatives for implementation within the scope of our corporate vision

c. Allocating resources to proposed and future EC initiatives

d. Tracking progress of each EC project and taking corrective action when a project falls behind schedule or fails to produce projected returns on resource investment.

1. *Corporate Electronic Commerce Office:* The CECO provides day-to-day management of our EC program. The Chief, CECO also chairs the Corporate EC Management Council and carries out its collective decisions. In addition, the Chief, CECO performs the following actions:

a. Tracks the on-time/on-budget progress of each EDI project

b. Validates savings and costs for each proposed project

c. Maintains and schedules support assets such as system analysts, management analysts, telecommunications experts, and programmers in support of individual EDI projects

d. Establishes and maintains a standard technical foundation on which each business unit will build its business-specific EDI business process improvement initiatives

e. Reduces concept-to-implementation times as well as resource investment in EDI efforts by helping business units incorporate the work of completed initiatives

f. Represents corporate interests at technical and trade group meetings

g. Provides corporate-level familiarization and liaison to vendors interested in doing business electronically with DPSC

h. Represents DPSC at meetings at which EC issues are discussed.

2. *Business unit directors:* The director of each business unit is responsible for the following activities:

a. Participating as primary member of the Corporate EC Management Council

b. Defining, justifying, funding, and implementing individual business-unit-level EDI initiatives

c. Representing the business unit at industry meetings that address industry-specific business and EDI implementation issues

d. Working with vendors and customers within the industry group to negotiate trading partner and other agreements that are important to the successful implementation of EDI.

3. *Business Unit Chief, Corporate Electronic Commerce Office and Project Managers:*. Managers of a specific EC project or group of projects in each business unit are responsible for the following activities:

a. Defining, justifying, registering, and implementing EC projects that will make their business units more competitive in the future

b. Working with the CECO to identify and schedule technical personnel as they are needed to assist with a specific project

c. Identifying any roadblocks that may prevent their projects from being implemented on time and within budget.

CHAPTER 4

Guiding Principles, Goals, Objectives, and Strategies

This chapter describes our guiding principles, goals, objectives, and strategies for our EDI projects. Guiding principles represent management philosophy we apply to the competition of EDI projects. Goals are general statements of the purpose toward which we will direct our program. Embodied in them are the broader goals of DoD's EC program for cost savings and quality improvements. Objectives are specific statements of the means we use to realize our EDI program goals. Strategies describe the steps we follow to attain our EDI program objectives.

GUIDING PRINCIPLES

Our goals and objectives are each based on the following guiding principles:

♦ We will reduce the cost of operations, improve quality, and increase productivity by removing non-value-added business processes and information exchanges. Clearly, the effective use of EC requires not only that we automate our paper processes but, more important, that we fundamentally change our business operations to eliminate redundant and obsolete processes.

♦ We will focus on the highest payoff opportunities to achieve initial success that will help sell and encourage future EDI efforts. We will gain experience with this new technology, achieve the maximum return on our investment of resources, and implement those business process improvements that are most needed to make us more competitive.

♦ We will encourage decentralized project management in each business unit. DPSC senior management and our CECO will empower and support project leaders with whatever they need to succeed. We will intervene only when necessary to get a project back on schedule or within budget. At the highest corporate level, our primary role as manager will be to define a consistent, compelling vision of our overall business approach that each of our commodities can focus their resources on achieving.

♦ We will ensure that any new operating or management procedures (e.g., for project reporting) add value that exceeds any negative impact on the business unit.

◆ We will ensure that our EDI initiatives do not exclude particular contractor communities. We will, for example, avoid implementing EDI initiatives that might prevent small vendors from doing business with us.

GOALS

Using the above principles as a foundation, we set the following four goals for our EDI program:

◆ Empower EDI implementers with the skills, support, technological base, and environment they need to succeed.

◆ Improve the sharing of information on EC among our senior managers, project leaders, users, and trading partners to encourage innovative thinking, minimize duplication, and reduce concept-to-implementation times for all EDI projects.

◆ Track each EDI implementation project. Monitor on-time and on-budget project progress and measure projected costs and benefits against actual costs and benefits for revenue enhancement, cost savings, quality improvement, and reduced service times.

◆ Identify and develop new EDI opportunities. The CECO will act as the catalyst to encourage the use of EC/EDI to provide new business process improvements that will make us more competitive.

The remainder of this section describes the goals listed above in greater detail. For each goal, we propose several objectives, and for each objective, several strategies for achieving that objective. Unless otherwise noted, the Chief, CECO is responsible for executing and coordinating those strategies.

Goal 1

Empower EDI implementers with the skills, support, technological base, and environment they need in order to succeed.

OBJECTIVES

◆ Achieve executive-level consensus on EDI priorities, promote unity of direction, and resolve internal conflicts

◆ Develop EDI training at the center for all individuals concerned with EDI

◆ Publish a project implementation guidebook

♦ Develop project funding guidelines

♦ Establish standard economic analysis guidelines for completing business cases

♦ Establish and enforce technical standards

♦ Establish a standard technological platform of hardware, software, and tele-communications links on which each business unit can build its EDI applications

♦ Establish a cadre of technical support personnel for use by project managers as required

♦ Ensure that our other technology modernization efforts accommodate EDI

♦ Work to remove legal and other obstacles to achieving the benefits of EDI.

STRATEGIES

Step 1: The Corporate EC Management Council will meet monthly to discuss EDI project priorities, to resolve internal conflicts or support problems, and to ensure that each business unit's EDI efforts remain focused on achieving the command's business vision.

Step 2: The CECO will acquire a basic level of expertise in EDI standards and technology and will then create training classes for others in the command. That training will provide the following:

♦ A common EC vocabulary and an awareness of the technology

♦ An awareness of EC successes elsewhere within DPSC and in other government and commercial organizations

♦ An understanding of command requirements for EDI project justification, registration, development, and management.

Step 3: The CECO will distribute an EDI project implementation guide that describes how to write a project proposal; determine costs, benefits, and return on investment; win management approval; and comply with internal DPSC registration and reporting procedures. That guide will provide the text for our EDI training and be oriented toward individuals involved with EDI projects.

Step 4: The EDI Program Office will develop funding guidelines to facilitate new start-up initiatives and to keep successful projects on budget. To encourage users and implementers to start pilot projects, it will attempt to identify additional sources of funding with which it will underwrite EDI pilot project efforts. The EDI Program Office will review project proposals from potential

implementers, rank candidates by projected return on investment and mission importance, and apply selection criteria to determine which ones to seed. For projects with short-term payoffs, it will allocate seed money using an incremental approach: it will invest a specific amount of money after implementers and users agree on the resulting benefits, and no additional funding will be forthcoming until the short-term efficiencies are met. Seed money will augment commodity funding. Where needed, the CECO will work with users and implementers to identify alternative sources of funding. The CECO will direct its funding to those projects that have the biggest payoffs for DPSC.

To fully exploit an EDI opportunity, the CECO or the Corporate EC Management Council may decide to implement a suite of EDI transactions rather than just one or two. Although the additional transactions may have low volumes, the entire suite may provide greater benefits than the individual transactions do separately.

The CECO will develop guidelines for analyzing the costs and benefits of candidate projects. Centerwide analysis standards will allow the CECO to compare different projects on the same net-present-value, internal-rate-of-return, or payback-period basis.

Step 5: We will establish and rigorously enforce the use of DoD EDI standard implementation conventions wherever possible. That effort is particularly important in our capacity as the Functional Application Development and Demonstration Center, where the publication of our conventions will save others time and resources.

The CECO will coordinate with DITSO to ensure that each of our EDI efforts follows applicable standards and guidelines and that to the maximum extent possible, we present a single, consistent face to industry. We will tailor those guidelines, however, to ensure that we operate effectively in each of the industries of which we are a part. The CECO will accelerate the approval of standards that our commodities need the most and help implementers work around any lack of guidance in the interim. The CECO will also serve as the Center's focal point for data element standardization and coordinate with data base administrators in each commodity for locally unique programs.

Step 6: The CECO will support DITSO's efforts to overcome legal barriers to EC. The CECO will advise project implementers on work-arounds until changes in the Federal Acquisition Regulation (FAR) and the Defense FAR Supplement (DFARS) are approved.

Step 7: The CECO and the Corporate EC Management Council will work to overcome management and organizational barriers to EDI implementation, including internal conflicts, duplication of effort, and inadequate technical support. The latter has, in fact, historically been one of the most common roadblocks to project implementation. To preclude that from happening in the future, the CECO will hire or subcontract, and then schedule, technical personnel to support EDI project leaders for such tasks as mapping, translation, and software

modification. Technical personnel will include systems and management analysts, programmers, computer operations personnel, and telecommunications experts.

Step 8: To preclude the time lost when one business area duplicates the work of another, the CECO will use its knowledge of existing and completed EDI projects to assist in the development of new projects. The CECO will ensure that new project proposals consider and incorporate to the maximum extent possible the work of those efforts as a means of reducing project resource investment and concept-to-implementation time.

Step 9: The CECO will promote standard communication agreements and protocols and help develop generic architectures among the business units. By standardizing on specific technological procedures and architectures, we will reduce our concept-to-implementation project times and the future cost of system maintenance. With a standard technological architecture, only the functional interfaces to that architecture will be needed to bring new applications on line.

Goal 2

Improve the sharing of information on EC among senior managers, project leaders, users, and trading partners to encourage innovative thinking, minimize duplication, and reduce concept-to-implementation times for all EDI projects.

OBJECTIVES

◆ Improve communication between business unit EDI program managers, implementers, and users

◆ Improve communication between the DPSC and other DoD EDI communities

◆ Improve communication between the DPSC and non-DoD (government and commercial) EDI communities

◆ Distribute EDI standards information within the DPSC vendor community

◆ Build and maintain a directory of DPSC EDI contacts.

STRATEGIES

Step 1: The CECO will be the central clearinghouse for information about our EC/EDI program. That information will include the following:

- Lessons learned by implementers in each business unit (e.g., how to select trading partners or how to get a transaction set mapped)

- Funding issues

- Technology developments (local, national, and international)

- Standard updatings and other EDI information.

The CECO will accumulate that information from various sources, including the following:

- ANSI standards and workbooks

- Trade magazines, conventions, and trade shows

- Current and potential trading partners

- Project implementers in each commodity

- Other government organizations.

Step 2: To distribute this information, the CECO will use the following methods, among others:

- Electronic mail

- Electronic bulletin boards

- Newsletters

- Local vendor EC awareness classes (in coordination with the DPSC Small Business Office) for potential trading partners

- Regional user groups and annual conferences

- Project management and implementation training for EDI implementers to help those individuals accurately identify resource requirements at commodity and corporate levels, forecast their budgets, and develop and meet specific time schedules.

Step 3: The CECO will assemble and maintain an up-to-date, consolidated directory of individuals in the public and private sectors to whom commodities can turn for additional information. That directory will be available to implementers and other parties through an electronic bulletin board. It will also be available to other DoD and government sources under the auspices of DPSC's responsibility as the Functional Application Development and Demonstration Center.

Goal 3

Track each EDI implementation project; monitor on-time and within budget project progress; and measure projected costs and benefits against actual costs and benefits for revenue enhancement, cost savings, quality improvement, and reduced service times.

OBJECTIVES

♦ Distribute a project implementer's guide

♦ Establish project registration procedures

♦ Establish performance reporting procedures

♦ Develop cost-savings measurement and analysis techniques

♦ Develop a project tracking system.

STRATEGIES

Because our resources are limited, we must ensure that we are working on projects that are consistent with our business vision and that the efforts of individual project coordinators are on time and on budget.

Step 1: Each business unit will submit a registration package to the CECO for each EC project it intends to pursue. That package will include an economic analysis, an implementation schedule, and a list of all parties involved. The economic analysis portion of the registration package will use industry-accepted return-on-investment models, such as net present value, internal rate of return, and payback period.

Step 2: The CECO will review each registered project to ensure that it is consistent with the command's EC vision and that it does not duplicate similar efforts in another business unit or at the corporate level. The CECO will complete that review within 20 working days and inform the business unit. If in the opinion of the CECO, the registered project is inconsistent with the command's vision or if it duplicates another effort that is already under way, the CECO will submit that project to the Corporate EC Management Council for a final decision at its next meeting.

Step 3: Unless the CECO informs the registering commodity within 20 working days that its proposed project is inconsistent with the command's EC vision or that it duplicates another effort, business units may assume that they can proceed with project implementation.

Step 4: Commodity EC coordinators will use a standard digital format to submit to the CECO a quarterly progress report on each EC project they are implementing. That report will provide information on the following:

◆ Implementation progress relative to the implementation schedule defined during registration

◆ The up-to-date project schedule, with explanatory comments in instances in which unanticipated events prevent adherence to the existing project schedule

◆ Adjusted anticipated savings or costs, whenever those data vary significantly and negatively from anticipated levels.

The CECO will enter those reports by commodity and project into a corporate automated EC project tracking system that it is designing. That system will compare actual cost savings and benefits with estimates and highlight serious negative variances.

Step 5: When a project is seriously over budget or behind schedule, the CECO will work with the business unit involved to resolve any roadblocks. If in the opinion of the CECO a project is likely to fail because of delays or funding problems, the Office will place that project on the agenda of the next Corporate EC Management Council Meeting for review, modification, or cancellation.

Goal 4

Identify and develop new EDI opportunities. The CECO will act as the catalyst to encourage the use of EC/EDI to provide new business process improvements that will make us more competitive.

OBJECTIVES

◆ Develop and publicize EDI project criteria

◆ Establish an ongoing scouting process to identify new opportunities

◆ Export successful EDI applications to other functional areas in the command.

STRATEGIES

Step 1: The CECO will work with each business unit to identify new high-payoff opportunities using surveys, interviews, and research. It will teach potential benefactors the benefits of EDI and show them how to identify candidates for

pilot projects. The CECO will use the following criteria to identify areas of opportunity:

♦ The potential to enable fundamental changes in business practices that will make us more competitive

♦ Volume of paper exchanged

♦ Level of automation (at both DPSC and its trading partner sites)

♦ Compatibility with existing business practices

♦ Willingness of trading partners to participate.

Step 2: After the pilot projects have succeeded, the CECO will look for possible applications in other areas that could use the same transactions and technology. We will update our project baseline as new projects begin and successful ones expand.

CHAPTER 5

DPSC Action Plan for Implementing EDI

This chapter assigns responsibilities and time frames for implementing EDI at DPSC. We shall constantly update our plan of action (Table 5-1) as circumstances dictate.

Table 5-1.
DPSC Plan of Action for Implementing EDI

Priority	Milestone	Responsible person	Date due	Date completed
1	Hold first meeting of Corporate EC Management Council	Betsy Smith		May 1993
2	Issue policy statement about EDI management responsibilities for various levels	Dennis Dudek	August 1993	
3	Create DPSC-wide training classes	Betsy Smith		March 1990
4	Issue EDI implementer guide defining concept, justification, registration, implementation actions, and help available	John Simpson	September 1993	
5	Begin project registration	John Simpson	October 1993	
6	Begin project tracking (on time, on budget)	John Simpson	October 1993	
7	Begin project validation (benefits versus costs) of current/future projects	John Simpson	October 1993	
8	Identify strategies for recording and eliminating legal, regulatory, and other roadblocks	DPSC-B, P	July 1993	
9	Develop a technical support plan for hardware, software, translators, VAN use, and implementation conventions	Betsy Smith	January 1994	
10	Create EDI POC data base	John Simpson	September 1993	
11	Execute training plan	Betsy Smith	On-going	
12	Monitor projects for redundancy, nonstandard implementation, etc.	John Simpson	On-going	
13	Evaluate van requirements	Betsy Smith	August 1993	
14	Set up EDI training and familiarization courses			

CHAPTER 6

Current and Future EDI Projects

INTRODUCTION

This chapter discusses our current and future EDI projects. First, we discuss our corporate-level projects. They are primarily focused on creating a common technical, support, and procedural base that will reduce the time our business units take to complete their individual, functionally oriented EDI projects. That base is important because it creates a strong foundation on which we will build our new EC business procedures in each of our business units. With that foundation in place, our business units will not have to invest their time and money in re-creating software, hardware, or telecommunications platforms for their individual EDI projects. They will then be free to implement business process improvements faster and provide us with resources that we can invest in additional improvements.

After that, we discuss EDI projects in each of our three business units: medical, clothing and textiles, and subsistence. As a backdrop to that discussion, we describe each business unit's concept of future operations to give readers an appreciation of the industry-specific environment in which that unit does business. We also provide the projected savings that each unit anticipates from an EC business environment.

CORPORATE-LEVEL EDI PROJECTS

Develop a Strategy for Using Value-Added Networks

The goal of this project is to issue policies and procedures define how we will communicate with our business partners in the future using value-added networks (VANs). We are coordinating our efforts closely with DITSO, which is defining the overall DoD VAN strategy.

Define Statistical Reporting Requirements for Current and Future EC/EDI Projects

This project's goal is to create the tools and procedures to track individual EC/EDI projects from concept through implementation. The project management tracking system will do the following:

- Identify proposed projects, their costs, and their benefits for potential funding

- Ensure that in-process projects remain on schedule and on budget

- Highlight in-process projects that need management attention

- Reduce duplicative efforts in other business units by incorporating one unit's EDI efforts into another unit's projects

- Track actual costs and benefits against estimated costs and benefits declared during conceptual project development to ensure that we realize sufficient return on our investment.

Coordinate the Conversion of SPEDE to Full ANSI Compliance

The goal of this project is to create a version of the Standard Automated Materiel Management System (SAMMS) Procurement by Electronic Data Exchange (SPEDE) system that complies fully with ANSI criteria. During Operation Desert Storm, SPEDE provided us with the capability (with few additional personnel) to quickly and significantly increase the number of purchases we made for our customers. ANSI compliance will further enhance the usefulness of this system and make it a central part of our future EC business environment.

Develop EC/EDI Training Tools for Use in the Business Counseling Center

This project focuses on creating the training tools in our Business Counseling Center that will allow us to acquaint potential business partners, particularly small businesses, with the concepts, benefits, and procedures for dealing with us electronically. We also want to create a capability for training our own personnel to facilitate and speed our use of EC/EDI (see Chapter 4).

Create a Transition Plan to Update the Environment of Each Business Unit

The goal of this project is to provide each business unit with an EDI environment offering maximum flexibility for dealing with business partners in the unit's specific industry.

Participate in the Development of the DoD Telecommunications Distribution Points System

Currently, DITSO is establishing a telecommunications network of six nodes that will distribute EDI transactions to and from the commercial sector for all DoD organizations. Each distribution point will then deal with commercial VANs on behalf of its DoD customer base. The goal of this project is to smoothly integrate our internal EDI processes with those of the Aviation Supply Office, our distribution point, to ensure a smooth flow of data out to and back from our business partners.

BUSINESS UNIT CONCEPT OF OPERATIONS — THE NEW BUSINESS RULES

In prior times, our business practices in contracting, inventory management, and distribution were frequently unique to the Military and relatively unconstrained by the emerging business realities of the 1990s. Our re-engineered business practices for the 1990s and beyond will be based on three simple criteria in each of our business units:

◆ Processes must enhance the ability of each business unit to provide its products at a cost that customers will find desirable.

◆ Processes must enhance the quality of each business unit's work products in customer-focused ways.

◆ Processes must enhance the productivity of each business unit's work force.

These business criteria, which guide improvements in the cost, quality, and delivery time of each business unit's products, exist to support a single business objective: to add value to the products and services we offer customers.

In the future, our business units will function much as a large buying group representing the collective needs of its customers in dealing with vendors. In that capacity, we will be able to negotiate significant price reductions for our customers by leveraging DoD's massive buying power and, where possible, by increasing our customer base by representing other government agencies. Unlike a commercial buying group, however, we will also maintain an ability to respond

to emergencies such as natural disasters, humanitarian relief, peacekeeping missions, and war.

MEDICAL DIRECTORATE CONCEPT OF OPERATIONS AND PROJECTS

The DPSC Medical Directorate provides the Military Services with pharmaceuticals, medical/surgical supplies, dental supplies, medical equipment, and the appropriate repair parts. In addition to DoD customers, it serves customers in other government agencies such as the Public Health Service and the Department of Veterans Affairs. Historically, we have satisfied the majority of our medical sales from stock held in our depots. Over the past several years, however, customer demands for faster, more reliable service have led us to contract with third-party distributors to provide our customers with what they needed, when they needed it, at a price they considered attractive. Customer response to these "prime vendor" contracts has been quite favorable, and we now expect to offer prime vendor support for pharmaceuticals and medical/surgical items to customers throughout the continental United States by 1994.

Over the past 2 years, the Medical Directorate has increasingly used EDI in dealing with its business partners. In our prime vendor program, for instance, we require that vendors use EDI in dealing with us for invoicing and payment including EFT. In the near future, customers will place their orders directly with their prime vendors using an ANSI ASC X12 Transaction Set 850, *Purchase Order*. We, in turn, will receive catalog data from vendors and provide them to our prime contractors using an ANSI ASC X12 Transaction Set 832, *Price/Sales Catalog*. For the period January 1993 through May 1993, we used EDI to purchase $79.2 million worth of medical material. In 1992, our total sales were $1.02 billion.

Electronic data interchange initiatives planned or under way in the Medical Directorate are aimed at integrating functions into a seamless electronic network of finance, contracting, supply management, and supply distribution capabilities. The standard ANSI X12 transaction sets we will use in the Medical Directorate are shown in Table 6-1 (outgoing) and in Table 6-2 (incoming).

In addition to those transaction sets, we plan to implement other transactions to support quality assurance functions, enhanced financial management, contract administration, and advanced electronic cataloging functions. Those transaction sets are shown in Table 6-3.

All of the transaction sets comply with standard conventions in the health care industry so that we are ideally positioned to do business electronically in that industry. As in all of our business units, our long-term strategy is to impose no special conditions on vendors that they do not see from others in the industry. We will do business the way business does business.

Table 6-1.
Outgoing Transaction Sets

Transaction set	Title
820	*Payment Order/Remittance Advice*
830	*Planning Schedule with Release Capability*
836	*Contract Award*
840	*Request for Quotation*
850	*Purchase Order*
860	*Purchase Order Change Request — Buyer Initiated*
869	*Order Status Inquiry*
997	*Functional Acknowledgement*

Table 6-2.
Incoming Transaction Sets

Transaction set	Title
810	*Invoice*
830	*Planning Schedule with Release Capability*
832	*Price Sales Catalog*
843	*Response to Request for Quotation*
848	*Material Safety Data Sheet*
855	*Purchase Order Acknowledgement*
856	*Ship Notice/Manifest*
865	*Purchase Order Change Notice Acknowledgment/Request — Seller Initiated*
870	*Order Status Report*
997	*Functional Acknowledgement*

Benefits and Costs of Electronic Commerce in the Medical Directorate

In the past several years, our Medical Directorate has received $4 million from DoD's corporate information management initiative to implement new EC business practices. Over the next 5 years, we will receive an additional $18 million. That funding resulted from a business plan that we prepared in conjunction with the DoD retail medical community in 1991 — 1992. In that plan, we estimated that we could reduce our inventories by 60 percent using EC and other business methods. To date, we have reduced inventories from $574.5 million in May 1992 to $371.6 million in May 1993 — an inventory savings of $202.9 million from EC and other business method changes. We are currently on schedule for reaching inventory reduction targets that we set in our business plan.

Table 6-3.
Future Transaction Sets

Transaction set	Title
835	*Health Care Claim Payment/Advice*
841	*Specifications/Technical Information*
842	*Nonconformance Report*
858	*Shipment Information*
859	*Freight Invoice*

Medical Electronic Commerce Initiatives

In this subsection, we describe medical EC initiatives in 11 different areas.

◆ *Advanced Distribution Systems:* Several initiatives are key elements in our drive to shorten customer order and ship time (OST), reduce inventory, and improve productivity. These continuous replenishment systems allow for reduced procurement administrative lead time and will have the net effect at customer levels of lowering inventories, reducing spoilage and waste, improving accountability, and reducing the costs of operations. These systems will be especially important to customers as they implement DBOF requirements and must pay for the full cost of all of the local services they now receive. Among the initiatives in this area are the following:

▶ *Prime vendor:* This initiative, which brought its first customers on-line in less than 1 year, is a cornerstone of the Medical Directorate's commitment to provide customers with next-day supply of rapidly consumed items at highly competitive prices.

▶ *Dedicated truck:* This program provides many customers with regularly scheduled deliveries of depot-stocked items. Because of its shorter lead times, customers may hold smaller safety stock inventory at their locations. For example, at Walter Reed Army Medical Center this program has resulted in a 50 percent reduction in local stocking levels.

▶ *Dedicated plane:* This new program provides many customers in remote locations with regularly scheduled air deliveries of depot-stocked items. The program is similar in scope and effect to the dedicated truck program.

◆ *Electronic business systems:* This group of initiatives greatly enhances our ability to conduct business electronically whenever possible. This program will be supported by converting existing SPEDE transactions to ANSI ASC X12 transaction sets, and use of new and more robust ANSI X12 transaction sets, as well as sophisticated, high-speed data communications networks.

Improved business practices will allow better utilization of the capabilities of all the other initiatives.

► *SPEDE orders:* This ongoing program provides electronic bids and makes awards to vendors for small purchase items for direct delivery to customers. Sole-source, Federal Supply Schedule items are awarded immediately. As noted above, SPEDE transaction formats are being converted to ANSI ASC X12 formats. As of April 1993, more than 180 vendors participated in SPEDE.

► *Orders:* This ongoing program provides electronic orders directly to vendors for specific high-volume items. In Phase I, material is shipped to the depot. In Phase II, vendors ship directly to the customers. As of April 1993, 42 vendors were in the Phase I program and 7 vendors in Phase II.

► *Transaction tracking data base:* This project provides electronic confirmation of order receipt directly from vendors. The system ensures that electronic orders are received and acknowledged by vendors within a specific time period.

► *Faster requisition processing:* This initiative proposes changing SAMMS in minor ways, including adjusting its processing schedule to reduce the average internal DPSC requisition processing time from several days to 1 day. This improvement will result in faster delivery times for several distribution methods, including direct vendor delivery and EDI.

► *Electronic payment:* Vendors operate in a highly competitive environment and are highly sensitive to cash flow considerations. As a result, we can negotiate better prices from a vendor who can reasonably expect to be paid rapidly. Electronic funds transfer programs that many vendors use provide this "quick pay" functionality. Under this initiative, more than 25 companies are now invoicing us electronically and receiving EFT payments for their invoices.

◆ *Electronic invoicing:* This initiative is closely associated with the electronic payment initiative. As more items are converted from depot stock to acquisition through SPEDE, EDI, and the prime vendor initiative, the number of vendors participating in electronic invoicing grows, thus reducing the amount of more costly paper invoice processing. As of April 1993, more than 100 vendors were participating in this program.

► *Electronic cataloging:* This initiative will gather information from vendors on product descriptions, classifications, pricing, quantity discounts, promotional sales, and distribution into a data base system known as the Medical Electronic Customer Assistance (MECA) System. That electronic catalog will initially include medical-surgical supplies, pharmaceuticals, equipment, and repair parts. Other health care sub-commodity items such as dental supplies and veterinary items will be

added later. Using industry standard product classification systems, the MECA system will provide customers the means to identify and order brand name or generic health care products on a competitive basis by comparing delivered prices among various methods of purchase and sources of supply such as prime vendor, direct vendor delivery, mail order pharmacy, and depots. The MECA system will also correlate peacetime consumption information with Deployable Medical System information for emergency planning by product class.

► *Electronic reports of discrepancy (RODs):* We are currently pursuing this initiative as a pilot program with the Navy. When the system is functional, it will allow customers to efficiently create and transmit RODs in an electronic format. By receiving these documents electronically, we will be able to process them in much less time, at lower costs, and with far greater accuracy. This initiative will significantly improve our recovery of monetary damages and/or replacement products from vendors for products that are still contractually covered by specified warranty periods.

► *Repair Parts System:* This new initiative addresses customer requirements to order repair parts for major medical systems, such as radiological and nuclear medicine equipment. We are currently working with our customers to identify the best contracting and EC methods to address this sensitive area. Repair parts requirements range from readily available products to proprietary items and run the gamut from short to long lead times and from light to heavy usage. Many repair parts are large-dollar items (over $25,000). Traditionally, vendors often respond more quickly to requests for repair parts from customers who have purchased a service contract. DPSC is including a study of private-sector initiatives in developing a solution, which may encompass several traditional and new types of contracts and EC systems.

► *Benchmarking:* This ongoing initiative allows us to compare our operations periodically to those of similar organizations in the private sector. Its purpose is to show management where improvements can be made and to verify the efficacy of existing business practices and supporting electronic transaction sets. In the near future, we intend to export this initiative into our other business units.

◆ *Mail-Order Pharmacy System:* This initiative is modeled after similar programs in the private sector in which customers receive their maintenance drugs through the mail. We are currently studying various private-sector programs to incorporate the best features of each before beginning a pilot program.

◆ *Bid/award system:* We will expand our electronic bid and award system, using ANSI-compliant transactions to do the following:

- ► Maintain an electronic bidders list of companies interested in certain medical subcommodities

- ► Announce government requirements

- ► Solicit bids

- ► Collect and analyze bids

- ► Announce contract awards and modifications.

- ◆ *Customer Order System:* In the future, we will provide electronic ordering capabilities to medical treatment facilities, which will allow them to format and transmit their requirements to us rapidly. That capability will be applicable to all health care industry products. It will reduce order transmission times and other components of procurement administrative lead time.

- ◆ *Quick response (QR) replenishment:* This planned initiative is a key element of the Directorate's drive to shorten cycle times and improve productivity. Quick response is a business strategy that uses EDI to share information between trading partners. That information includes consumption, demand, and inventory stocking levels. Quick response recognizes the mutual dependence of producer, distributor, and end user. It seeks to optimize the responsiveness and cost efficiency of the distribution process by sharing information on sales and demand between all levels of the distribution chain. Quick response allows customers to reduce procurement lead time, decrease inventories, reduce spoilage and waste, improve accountability, and reduce costs of operations. At the same time, vendors can profit by improved forecasting of demand, reduced order cancellations, and lower finished goods inventory levels. We will establish the long-term vehicles and systems necessary to facilitate this exchange of data between medical treatment facilities and vendors.

- ◆ *Point-of-sale (POS) data collection:* Our ultimate goal is to satisfy our customer as automatically as possible by knowing what the customer uses and, therefore, what the customer will need. We intend to collect that information using POS data gathered automatically at nursing stations, carts, and pharmacies. We will analyze that information to identify customer consumption patterns, predict requirements, and anticipate trends for medical-surgical and pharmaceutical supplies. This form of data collection is particularly applicable to health care products where consumer demand can shift dramatically from day to day and where consumption patterns cannot be predicted precisely over long periods.

- ◆ *Universal demand tracking:* In this initiative, we will use peacetime demand to forecast wartime demand more accurately. We will do this using consumption tracking gathered from POS data collection as well as other sources, such as prime vendors. The system will account for substitute and

superseded products, competitive items in the same family of products, and contingencies for emergency and war planning.

♦ *Expert systems:* Expert systems are computer programs that act like expert consultants to predict outcomes of events or provide problem diagnosis. We intend to use expert systems extensively in the future to support our ability to quickly react to logistics challenges in the next century.

♦ *Project management systems:* For each of our EDI projects, we will use sophisticated project management systems to ensure we remain on schedule and within budget.

Medical Implementation Strategies

The new realities of our business environment and the "rules" for acquiring investment capital mandate that our projects yield short- and long-term benefits. To meet this goal, we are focusing on implementing programs that have payback periods of 24 months or less. Those programs typically improve worker productivity, lower prices, and improve product quality.

As we define new EC/EDI business process improvements, we evaluate each by its ability to do the following:

♦ Reduce customer and/or depot inventory levels

♦ Lower administrative overhead costs

♦ Reduce delivered product costs

♦ Increase customer product range and availability

♦ Minimize delivery time

♦ Maximize service reliability and accuracy.

Calculating an estimated return on investment (ROI) for proposed future EC/EDI initiatives requires that we consider several factors. When we look at reducing delivered product costs (product price plus the cost of shipping), the following list of commodities indicates the order in which pricing initiatives are likely to produce the highest ROI:

♦ Pharmaceuticals (high volume, high unit cost)

♦ Medical-surgical supplies (high volume, high unit cost)

- Medical repair parts (medium volume, medium unit cost)

- Medical equipment (low volume, high unit cost).

The following projects (in priority order) will produce the highest ROI when focused on shortening order-to-delivery cycle times, improving responsiveness, minimizing errors, and lowering delivered costs:

- Advanced Distribution Systems programs, which allow customers to improve significantly and to reduce local inventories. These programs are already cutting customer costs.

- Electronic cataloging initiatives, which will provide customers access to timely decision-support information and allow them to take advantage of competitive product pricing dynamics.

- Quick-response replenishment and electronic ordering initiatives, which will reduce overall order-to-delivery times and inventory levels.

- Point-of-sale data collection and consumption tracking initiatives, which, although of slightly less importance in the short term, will be key to our long-term success. They will establish direct links with customers and vendors, identify customer needs and buying patterns, and provide information to vendors to satisfy the needs quickly.

- Electronic Commerce processes aimed at *improving the* invoice collection and payment capabilities, such as the EFT initiative, which may offer relatively less short-term payback.

Issues and Concerns

LEGACY SYSTEMS

We are concerned that no long-range plans to replace existing systems such as SAMMS have been prepared. Such legacy systems were designed in an era when batch processing on large, central, mainframe systems was sufficient to satisfy customers. Although we will interface with whose systems, using mapping and translation software, they still do not fully address current business requirements for on-line, real-time responsiveness to customer needs.

We need modern distributed and relational data base systems to best satisfy our future business requirements and to quickly respond to our customers' needs. Current distribution strategies that reduce inventory and costs such as just-in-time techniques, improved planning, on-line links to customers and vendors, and more efficient use of resources all require that we have real-time computing power.

Laws and Regulations

We must operate within the laws established by Congress and the regulations promulgated in support of that legislation. Unfortunately, current laws and regulations that were meant to control paper processes restrict our ability to take full advantage of EC business efficiencies. For example, we must seek to have Congress change legislation such as that embodied in the Federal Acquisition Regulations (FAR) for contracts, and also to change current regulations that require the establishment of national stock numbers (NSNs) for all medical products. The private sector now has standard means to categorize health care products that no longer require us to maintain a cumbersome system to stock-number every item for which adequate demand exists.

CLOTHING AND TEXTILES DIRECTORATE CONCEPT OF OPERATIONS AND PROJECTS

Introduction

Of the three business units in DPSC, the Clothing and Textiles Directorate manages the largest number of stock-numbered items (32,000),[1] awards the highest proportion of procurements to small business (91.1 percent in FY91), and depends most on made-to-order items rather than on commercially available ones. It also uses as one of its sources DPSC's only manufacturing facility, a plant located in the DPSC compound in Philadelphia, Pa.

Historically, we acquired clothing and textile items in substantial but economical quantities and then distributed them from our wholesale depots to satisfy retail demand. Typically, we awarded large depot-replenishment contracts. We have satisfied a significant proportion of total demand through that system, with only limited dependence on local purchasing by the retail customer.

Our customers fit into one of the following three general categories:

♦ *Recruit Induction Centers (RICs):* The 13 RICs issue "bag items" (standard issue uniform and clothing items) to new recruits and consume those items in large, relatively predictable quantities.

♦ *Army, Air Force, Navy, and Marine Corps Exchanges:* The exchanges operate approximately 300 retail sales outlets, providing bag items and other uniform and clothing items to military members.

♦ *Organizational Supply Accounts:* Approximately 23,000 installation-level supply activities issue organizational equipment (such as individual field equipment; chemical protective items; camouflage clothing; special-purpose

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[1] Although we manage 32,000 clothing and textile NSN items, many of those NSNs are for different sizes of the same item. The Clothing and Textiles Directorate manages 8,900 generic items.

clothing; tentage; mattresses; and insignia, flags, and pennants) and some bag items.

We face special challenges in the Clothing and Textiles Directorate. The exchange services have sought authority to contract for some uniform items directly with the manufacturers. That presents a competitive alternative and a potential loss of business. We have also been called upon to achieve DBOF obligational authority reductions of $1.3 billion from FY91 through FY97. The Defense Management Report Decision 903, *Implementation of Clothing and Textile Policy Changes*, directed those reductions, which we are undertaking by reversing the growth of inventories, standardizing items, reducing the number of sizes of specific items, and using commercial specifications in place of military specifications. With FY92 sales of $1.2 billion, such reductions are highly significant and will require extraordinary actions on the part of the Directorate to reduce costs and improve service to its customers.

We have embarked on an ambitious program of business practice improvements that will meet the expectations of DMRD 903, reduce the costs of the items we sell, and improve the quality and responsiveness of our acquisition and distribution system. We are taking the following actions:

◆ Changing our procurement methodologies to rely more heavily on indefinite delivery contracts, multiple-NSN contracts, and multiyear contracts. Those changes are expected to shorten lead times for customer orders, decrease DPSC's contracting workload, reduce local purchasing costs for customers, and reduce item prices from the manufacturers.

◆ Modernizing item specifications to lower the cost of manufacturing. We are also taking a new look at the way garments are designed to reduce manufacturing and alteration costs. We plan to adopt commercial-like digital patterns and relax piece-to-piece shading requirements for work uniforms.

◆ Entering into "shared production" agreements with selected manufacturers to maintain a manufacturing base that is sufficiently large to meet surges in demand without having to maintain costly unused capacity.

◆ Soliciting proposals from manufacturers under our "Broad Agency Announcement" program to encourage the industry to identify ways that we can better acquire and distribute clothing and textiles goods.

◆ Adopting QR as our preferred distribution technique. Quick response vertically integrates the process of manufacturing and distributing goods to the customer and is a combination of just-in-time, lean production, and flexible manufacturing processes. Quick response stresses low inventories, smaller and more frequent replenishments, short lead times, direct delivery to customers (or to regional consolidation points if delivery to the customer is not feasible), and use of EDI.

Quick Response

Quick response distribution will function as follows:

- Item consumption will be monitored at the POS and electronically reported so that we and our manufacturers will have better, more timely visibility over customer demand and will be able to predict requirements more accurately.

- Ordering, shipment notification, receipt notification, and payment will be done electronically so there will be virtually no lead time or payment delays caused by paper processing.

- Contracts with manufacturers will call for producing and delivering smaller, more frequent orders so that retail customers will obtain their orders from us more quickly and predictably than they have in the past.

- Retail inventories should be reduced for quick response items, and wholesale inventories for those items will be virtually eliminated.

Quick Response in Clothing and Textiles

Of all the business practice improvements we are making, the one that offers the most promise toward achieving the Department's cost-reduction objectives in the near term is QR. It should result in an environment in which orders to manufacturers will be placed much closer to the time the user consumes them, thereby eliminating the current uncertainties in contracting that takes place 2 years or more before consumption. Quick response offers many other benefits and is the primary focus of our EC in clothing and textiles. (We enumerate the benefits of QR in the next subsection.)

Using feedback obtained from industry responses to our first round of Broad Agency Announcements, we have begun to modify our current contracts to incorporate components of QR. Although we have only recently made the first contract modifications, we have validated the concept of quick in a demonstration project that we jointly performed with DPSC's Directorate of Manufacturing. In that single-item test involving one RIC and three Army and Air Force Exchange Service sales stores, the Manufacturing Directorate maintained a production schedule that satisfied customer orders within 2 weeks (for relatively small order quantities) with an overall item price reduction of approximately 20 percent. Since beginning the test in August 1992, we have produced and shipped over 9,000 items to four customer activities.

Quick response originated in the commercial clothing industry, where styles change quickly and rapid response to changing demand is critical to retaining profitability. In that industry, manufacturers usually own the goods until sale to the customer, thus creating a strong incentive to vertically integrate the

manufacturing and distribution process. In the commercial clothing manufacturing environment, the following conditions prevail:

- Sales data transmitted from the point of sale are scrutinized to determine which items are selling and which are not. Production is increased for popular items, and distribution is carefully managed to avoid stockouts. Production of unpopular items is quickly stopped to cut losses. Since manufacturers usually own the inventory until sale to the customer, they have become very sensitive to the need for minimizing unnecessary or unpopular stocks.

- Manufacturing lots are very small and changes from the production of one item to another are made quickly. New, flexible manufacturing techniques permit manufacturers to produce small lots as economically as they used to produce large lots in the past.

- Shipping is done by parcel rather than by truckload. Although more costly, such shipments are worth the extra expense because they reduce inventory and increase product availability in a demand-driven market.

For DPSC, QR offers a somewhat different opportunity. The market for military items is not dependent on the style consciousness of customers but rather on the characteristics of the Military — characteristics such as the changing number and mix of individuals and units at various locations. Thus, the timeliness of distribution is still highly important. Unlike the commercial sector, we do not own retail stocks, so POS data are somewhat less critical to us and our manufacturers. However, our customers do need to find ways to minimize retail inventories, and POS data will be useful to that end. The ability to piggyback on the flexible manufacturing capabilities of our vendors should be quite useful, as should the concept of using rapid transportation instead of inventories to satisfy responsiveness standards.

We must deal with some peculiarities that make implementation of QR a challenge. First, we rely on a large number of contractors for whom we are the primary customer. Those vendors have little experience in the commercial marketplace and have not developed QR capabilities such as the ability to quickly change production from one item to another. Second, our customers will continue to want to control their fiscal resources and to place orders when they are prepared to pay for them. Thus, we and our vendors must retain the ability to react to purchase or delivery orders instead of producing and distributing goods on the basis of actual consumption by the customers. We expect, therefore, that retail-level inventories will not entirely go away. Third, automation systems used by customers will differ from one another for some time to come. Thus, the information that we share with our customers and our manufacturers must be translated to commonly-understood standards before it can be used. Finally (and most importantly), we must maintain our ability to increase the availability of many items quickly in the event of war or national emergency. Items ranging from chemical warfare defensive equipment to common uniform items must be

available in large quantities on extremely short notice, as was clearly demonstrated in Operation Desert Shield.

Benefits of Quick Response

The most important benefit of QR is that wholesale inventories and the cost of depots, personnel, handling, and losses that are associated with those inventories can be significantly reduced. In an earlier study, the Logistics Management Institute[2] estimated that 45 percent of our clothing and individual equipment sales could be converted to direct delivery by the end of FY97. The quantified impact of that action on wholesale operating costs is approximately $55.5 million over the first 5 years of QR and is summarized in Table 6-4.

Table 6-4.
Operating Cost Savings from Increased Direct Delivery and QR
($ Millions)

Description	FY93	FY94	FY95	FY96	FY97	Total
Direct delivery sales	77	146.8	213.2	270.1	320.8	1,027.9
Operations savings @ 5.4%	4.2	7.9	11.5	14.6	17.3	55.5

Other benefits arising from using QR procedures include the following:

♦ *Reduced waste:* Under our historical contracting methods, the 2-year lead times (procurement plus manufacturing) have dictated that we initiate the procurement process 2 or more years in advance of a customer's order. In that environment, quantities, sizes, and even the types of items that we contract for are sometimes well off the mark. By moving the time at which a contractor is notified of the need for an item closer to the time the retail customer needs it, we will be able to identify requirements, move accurately, deliver more precise quantities, and incur less waste.

♦ *Reduced number of backorders:* In the past, when depot stocks were depleted, we had to resort to small and expensive emergency contracts to satisfy customer demand until our normal replenishment contracts became effective. Emergency contracts are expensive. Not only are their unit item prices high, but the cost of generating and awarding those contracts also produces unanticipated ac ...istrative costs that are eventually passed on to customers. For items under QR, such "spot" contracts should not be required.

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[2] *The Logistics Management Institute Analysis of DMRD 903 (Revised), Implementation of Clothing and Textile Policy Changes,* LMI Report DL202LN1, Kelvin K. Kiebler, Larry S. Klapper, and John F. Olio, April 1993.

◆   *Lower retail inventories:* As the sources of retail customer inventories change from DLA depots to manufacturers, we expect that the size of their inventories will diminish. In the past, customers were forced to hold inventories as insurance against depot stockouts and backorders. Because of the extremely long lead times that were required to acquire clothing and textile items, backorders were sometimes unfilled for long periods. With shorter, more reliable lead times, customers will no longer need high inventory safety levels. Second, clothing and textile items are often ordered under a very low priority, and depot response times are quite slow. It is likely that response times under QR will be better than those from the depots. Smaller inventories will result in a one-time savings as stocks are not replenished and in annual savings from the reduction in local workload necessary to manage local stocks.

◆   *Lower prices:* Price reduction by component is not one of our explicit objectives in QR, and we do not expect price reductions from vendors. However, our limited experience in the demonstration project with the Manufacturing Directorate revealed that QR may result in price reductions for some items. We have not projected vendor price savings and have not used them in our cost analysis.

◆   *Cumulative effect:* The cumulative impact of reduced waste, reduced number of backorders, and lower retail inventories has not been fully quantified, although it is likely that it will be significant.

Strategy for Implementing Quick Response

We will implement QR for the acquisition and distribution of clothing and textile items as follows:

◆   We will continue pilot testing various approaches to QR. We are already using the Manufacturing Directorate as a demonstration center for the application of QR in the manufacture of clothing and textile items. That demonstration project has shown the effectiveness of alternative ordering frequencies, distribution frequencies and techniques, communications practices (especially EC practices), and manufacturing processes. These demonstrations are not considered prerequisite to the award of QR contracts to manufacturers but instead offer us the opportunity to continuously evaluate in a controlled environment alternative approaches to implementing QR. The Manufacturing Directorate is able to serve as a valid test bed for many aspects of QR, but not all. As a government activity, the Directorate cannot be used to evaluate the contracting techniques or payment processes (including the electronic transactions in support of those processes) that will be used for QR arrangements with outside manufacturers.

◆   We will target as broad a cross section of vendors as possible. Rather than testing the concept with a particular subset of vendors (such as mandatory sources), we will introduce the QR process among all types of suppliers. We

will carefully evaluate feedback from initial applications as the concept is expanded to include more vendor contracts.

♦ We will introduce QR by component [i.e., direct shipments, shipment diversions, EDI transactions (to replace paper transactions), and shipment acceleration]. As it is incorporated into contracts with our vendors, we will implement QR by component. For example, we awarded a contract in March 1993 that specified direct delivery of combat boots to one Army RIC. In subsequent contracts, we will individually introduce specific components of QR to demonstrate the incremental costs and benefits of each.

♦ We will use standard commercial practices to the extent possible to facilitate the transition of vendors from traditional contracts to QR. Those practices include the use of industry-standard electronic transactions, conventions, and networks.

♦ We will obtain POS data as early as possible from large customers (such as the RICs) so that we will be able to monitor consumption patterns and provide timely and detailed information to the vendors as they enter into QR agreements.

♦ We will integrate QR with EC to help us implement and manage our QR contracts. Electronic data interchange, for example, will be used to communicate and conduct business among customers, DPSC, vendors, and payment centers. Additionally, our internal automation systems will be rejuvenated to provide rapid assignment of customer requisitions to appropriate vendors and to accumulate information necessary for us to accurately portray customer demand in negotiations with and management of our vendors.

Our EC/QR has the following components:

♦ *Electronic POS capability in customer activities:* We would like POS data-capture-and-forward capability placed at all RICs within 1 year and at 65 exchange sales outlets within 3 years. We will receive POS data on a weekly basis from those sites and forward them to participating manufacturers. Point-of-sale data will be captured through the use of bar code scanners.[3]

♦ *Automated receipt processing in customer activities:* Quick response requires notification from customers that they have received an order. To do that customer activities must have the ability to scan bar-coded shipping labels that will be affixed to vendor shipments and to relay their receipt data to us in a standard transaction.

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[3]We envisage that customers will continue to order via funded the Military Standard Requisitioning and Issue Procedures (MILSTRIP) requisitions — the same process that they currently use. Point-of-sale data will be used by manufacturers for production planning and by us for item management.

♦ *Information exchange:* Table 6-5 is a list of the transaction sets we anticipate using in the information exchange among DPSC, manufacturers, and customers using EDI. We are evaluating use of Transaction Set 840 to communicate with mandatory sources (National Institute for the Blind, National Institute for the Severely Handicapped, UNICOR) as a means of notifying those agencies in advance that purchase orders will be forthcoming. Mandatory sources must allocate work between sites and our advance notification will allow them to make allocation decisions and to set prices before we send a Transaction Set 850, *Purchase Order.*

Table 6-5.
Transaction Sets Used in EC/QR Information Exchange

Transaction set	Title
810	*Invoice*
840	*Request for Quotation*
850	*Purchase Order*
852	*Product Activity Data*
855	*Purchase Order Acknowledgment*
856	*Ship Notice/Manifest*
860	*Purchase Order Change Request — Buyer Initiated*
861	*Receiving Advice/Acceptance Certificate*
997	*Functional Acknowledgement*

♦ *Integration of POS and receipt processing into Service supply management systems:* Although POS capabilities can be implemented as stand-alone systems in customer activities, they should be integrated into Service systems to minimize duplicate data entry and handling. That integration should be undertaken as a logical follow-up to the installation of POS, and it should be funded as a part of our EC strategy.

♦ *Value-added network access:* We will need access to one or more VANs to store and forward EDI transactions to our customers and vendors. We expect VAN charges for transactions between vendors and DPSC or our customers to be borne by our vendors. For transactions between the customers and DPSC, two alternatives exist. First, customers could communicate directly with us without using a VAN, or we could use an existing VAN agreement with General Electric Information Services (GEIS) for such purposes. We are currently evaluating both alternatives.

♦ *Communications capacity to process the large number of transactions that will be needed for QR contracting:* We estimate that transaction volumes will increase from present levels to the levels shown in Table 6-6.

Table 6-6.
Estimated Increase in Monthly Transaction Volume

Transaction type	Current volume	Projected volume
Invoice transactions	1,315	42,835
Purchase order transactions	1,315	84,835
Point-of-sale transactions	29	628

Costs to Implement Electronic Commerce in the Clothing and Textile Directorate

We project the cost of implementing electronic POS capability, automated receipt processing, and EDI translation in customer activities to be $1,837,600. We anticipate funding the equipment and software necessary for customers to implement POS, receipt processing, and EDI translation in their operations. We expect to bring a total of 80 customers on-line in FY93, FY94, and FY95 and an estimated cost for each customer of $25,220. The total cost will be distributed over 3 fiscal years as follows: $324,400 in FY93 and $756,600 each in FY94 and FY95.

DPSC ELECTRONIC COMMERCE SUBSISTENCE CONCEPT OF OPERATION AND PROJECTS

Introduction

The DPSC business unit responsible for providing subsistence relies almost entirely on commercial-sector capabilities and business processes to meet customer needs. Because of that reliance, we must bridge the gap between commercial practices and government procurement, distribution, and financial processes to carry out our subsistence functions effectively. At the same time, we must also ensure that the commercial practices truly meet the needs of our very diverse customer base.

On an annual basis, we sell $1.8 billion in subsistence items directly to more than 800 major troop-issue customers worldwide, the Defense Commissary Agency's (DeCA's) 509 military commissaries, and other non-DoD customers. Acting as the centralized acquisition agent for troop-issue customers and DeCA, we also centrally award another $4.5 billion of contracts that DeCA and troop-issue subsistence activities use to buy subsistence material directly.

In the past several years, the following four trends have made us question our customary approach to meeting customer requirements.

◆ Reduction of Military Forces and resources is significantly shrinking our traditional customer base. By 1996, we expect Active Duty Forces to decline by approximately 25 percent and the overall number of commissary customers by more than 10 percent. We also expect other reductions as the Defense Management Review (DMR) process produces reductions in DoD's infrastructure and support activities. Current DMRDs, for instance, mandate reductions in central inventories; consolidations of information services support; and increases in the use of commercial specifications, standards, and business practices.

◆ Customers are increasingly sensitive to paying our higher 16.6 percent cost recovery factor. That factor was applied when the DBOF required us to recoup all of our administrative costs in the price we charged for our products and services, and at the same time our cost recovery factor increased. Customers have experienced increased fiscal and performance pressures that forced them to buy an estimated $500 million in purchases locally without the benefit of any centralized contracting support. We expect this trend to continue until the DBOF forces local activities such as base contracting to recoup their costs, too, by charging customers for their services. Currently, purchases at the base or installation level are usually not subject to unit costing charges such as imposed by our cost recovery mechanism. Thus, customers are able to avoid the 16.6 percent "markup" by circumventing us entirely. While this anomaly will be corrected with the full implementation of the DBOF at the base/installation level, it is now creating patterns of ustomer buying activity that will be difficult to change in the future.

◆ The consolidation of Army, Navy, Marine Corps, and Air Force commissaries and commissary headquarters into a single, quad-Service Defense Commissary Agency. That action created a potentially formidable competitor that may well challenge our position as the subsistence provider of choice in the military sector. Currently, DeCA is our sole customer for the brand name products and contracts that we manage. It could develop its own internal contracting and acquisition capability in the future. That has already occurred with some products that DeCA provides on a sole-source basis to Air Force troop-issue customers.

The division of responsibilities between DeCA and DPSC has worked to the advantage of customers. Under this structure, we provide centralized acquisition support in the preparation of purchasing contracts, supply schedules, and product catalogs. DeCA performs traditional administration and management of consolidated commissary activities and oversees the actual purchasing of products from centrally established bulletins, contracts, and schedules. While these roles are fairly well delineated for both DeCA and DPSC at the present, that delineation could change as subsistence buying

patterns and practices come under increased scrutiny during the lean years to come.

◆ New and powerful information technologies are emerging. Those technologies will allow us to dynamically reconfigure our organizations, roles, responsibilities, and customer relationships in the future. The first of those technologies is "business process re-engineering" or "business practice improvement." Process re-engineering uses a set of information engineering tools and methods to radically overhaul an organization's internal processes. Using that approach, we expect to eliminate much of our administrative overhead, flatten our command-and-control structure in the Directorate, and streamline or eliminate activities that do not add value to the products our customers need.

Electronic Commerce is a second information technology and is the one that will enable us to fundamentally change the way we do business after we complete our business process re-engineering. In Subsistence, EC will do more than eliminate paper — it will allow us, our customers, and our trading partners to eliminate entire processes, thereby saving millions of dollars in operating costs and inventories at all levels. It will also facilitate the emergence of a new, customer-oriented organization that provides improved service and support with reduced costs. Because of EC's pivotal importance to the future of the Subsistence Directorate, we focus primarily on it in describing our future concept of operations in the remainder of this section.

As we continue to drive toward rigorous TQM goals to meet and exceed all customer expectations, we must be poised to play a leadership role in developing and implementing state-of-the-art EC business practices. That goal is possible because of the rapid evolution of pre-existing industry standards, such as the Uniform Communication Standard (UCS) and the continued evolution of newer standards, such as the Voluntary Interindustry Communications Standard (VICS) EDI/ANSI X12 protocols. At the same time, the emergence of sophisticated, vertically integrated food service providers on a regional and national basis will provide us with several new opportunities for satisfying customer requirements.

Electronic Commerce Environment

We will combine process re-engineering with EC capabilities. Progressive, profitable food-service distribution companies in the private sector routinely perform their essential business functions with one-fifth to one-tenth the personnel overhead we now employ in the Subsistence Directorate. They have achieved these efficiencies by systematically examining and discarding ineffective business practices and by automating new practices on the basis of customer needs and market conditions. We will take the same approach to use our existing resources, adapt to changing market conditions, and perform new value-added functions efficiently without adding additional overhead. Business practice improvements will allow us to redirect our work force toward the performance of

value-added activities that we provide to customers. Because we do have a substantial, well-trained work force, we will be able to provide extensive service in a variety of areas.

The business rules that govern the Directorate's EC environment dictate solutions that make optimum use of general EC principles while simultaneously recognizing and supporting the unique requirements of the subsistence business unit. Hardware platforms, telecommunications devices, executive software, and other EC components can be adapted from nonsubsistence sources. However, much of the EC software we will employ will be determined by the needs and capabilities of the commercial food-service industry. Further differentiation will be dictated by the unique subtypes of the food-service industry. For example, electronic cataloging initiatives, which form the core of the emerging EC environment, will differ the brand name products and the fresh fruits and vegetables segments.

Our future subsistence EC environment will be independent of many of our internal automated systems. We will use translators to convert data into and out of our proprietary systems to communicate with our business partners throughout the industry using EDI. As a consequence, our internal information systems, such as the Defense Subsistence Management System (DSMS), will require little or no modification to trade electronically with our business partners in the food-service industry.

The EDI computer-to-computer links are facilitated by several external trends that we will use to enhance our competitive position. The first is the development of three nationwide and international EDI standards within the commercial food-service industry. UCS protocol is predominant in the retail grocery industry and provides message (functional business transaction) and communications standards. The Warehouse Information Network Standard (WINS) is used as a transaction base for wholesale food-service communications and shares communications protocols with the UCS standard. The VICS is an ANSI X12-compliant protocol that is the newest and most extensive effort yet undertaken. It is administered by the Uniform Code Council (UCC), which also administers UCS and WINS, but its broad scope and relative "looseness" in protocol definition have of necessity slowed its spread.

Another external trend that we are taking advantage of is the development of ANSI-compliant standards for military information systems — the Modernization of DLSS project. MODELS conventions provide guidelines for the adaptation of military business communications to commercial ASC X12 formats and have been promulgated for the majority of common military transactions. MODELS provides a road map for the transition of military-unique formats, such as the MILSTRIP family of communications formats, to commercial standards. MODELS is in the advanced stages of process definition, and many of its formats are now available for use by applications system managers and functional users.

Electronic Commerce Implementation Strategy

Our current and future electronic commerce initiatives in Subsistence are aimed at significantly increasing the value we add to the products and services that we offer our customers. We intend to do that by fully integrating our functions into a seamless electronic network of financial, contracting, supply management, and supply distribution capabilities at DPSC. Our future environment will use existing technologies and the ANSI-compatible transaction sets shown in Table 6-7.

Table 6-7.
Outgoing Transactions

Transaction set	Title
820	*Payment Order/Remittance Advice*
830	*Planning Schedule with Release Capability*
832	*Price Sales Catalog*
836	*Contract Award*
840	*Request for Quotation (DPSC's Request for Proposals)*
850	*Purchase Order*
860	*Purchase Order Change Request — Buyer Initiated*
869	*Order Status Inquiry*
997	*Functional Acknowledgement*

Incoming transactions are shown in Table 6-8.

As is the case in most of the commercial sector, our current systems and processes are not yet configured to support a VICS/ANSI environment. We are now migrating toward that environment in concert with our commercial trading partners.

The future EC/EDI environment we will implement recognizes the unique considerations that apply to the subsistence commodity but is compatible with commercial business practices. Like our fellow business units, we intend to do business the way business does business. The business practices of the food-service industry will, therefore, be the template for our subsistence activities.

Table 6-8.
Incoming Transactions

Transaction set	Title
810	*Invoice*
830	*Planning Schedule with Release Capability*
832	*Price Sales Catalog*
843	*Response to Request for Quotation*
848	*Material Safety Data Sheet X12 855:*
855	*Purchase Order Acknowledgment*
856	*Ship Notification Notice/Manifest*
865	*Purchase Order Change Notice Acknowledment — Seller Initiated*
870	*Order Status Report*
997	*Functional Acknowledgement*

Current Electronic Commerce Initiatives

The following items summarize current and anticipated areas in which we are now implementing EC/EDI projects:

◆ *Electronic cataloging:* To enhance the ability of customers to identify, compare, and order brand name subsistence products, we have initiated an electronic cataloging project. This initiative gathers information from brand name vendors on product descriptions, various pricing levels, and time-sensitive sales and distribution data. Customers may use those data to make informed purchasing decisions. We plan similar functionality for meat, dairy, and bakery products. When electronic cataloging is fully functional, we expect it to markedly improve our ability and that of our customers to remain abreast of rapidly changing market conditions for meat, dairy, and bakery products.

◆ *Rapid Replenishment:* The rapid replenishment initiative applies to the replenishment of brand name, processed fruits and vegetables; chilled/frozen products; and general-purpose subsistence items. Rapid replenishment uses electronic transmission of product usage and requirements data to shorten cycle times and improve productivity. Rapid replenishment reduces procurement administrative lead time, which allows customers to decrease their inventory levels; reduces spoilage and waste; improves accountability; and reduces the cost of operations.

◆ *Electronic payment:* Because vendors operate in an extremely competitive environment that is highly sensitive to cash flow considerations, we can obtain lower prices by paying our bills faster. Toward that end, we are now

establishing electronic funds transfer and invoicing programs in the brand name, processed fruits and vegetables; chilled/frozen products; and general-purpose subsistence segments.

- *Point-of-sale data collection:* Our ultimate goal is to provide customers what they need with little or no effort expended on their part. By collecting POS data through automated links with retail stores, we can capture and analyze customer consumption patterns, predict requirements, and anticipate trends. Point-of-sale data collection is particularly applicable to the subsistence commodity, where consumer demand can shift dramatically from day to day and where highly seasonal consumption patterns cannot be predicted precisely. We will collect POS data on brand name, processed fruits and vegetables; chilled/frozen products; and general-purpose items to enhance our predictive capability. A subset of the POS collection functionality is the automated retrospective consumption tracking capability envisioned for the meat, dairy, and bakery product sector.

- *Depot inventory tracking:* Functionally similar to the POS project, depot inventory tracking will give us continuous, uninterrupted visibility of food products from time of receipt to time of shipment from the depot. Current methods of inventory visibility are fragmented, incomplete, and sometimes internally contradicting. Integration of existing methods, combined with the development of new capabilities, will improve inventory management effectiveness, reduce costs, and increase product availability.

- *Bid/award system:* We intend to implement electronic bid and award systems using ANSI-compliant transactions to announce government requirements, solicit bids, collect and analyze bids, and announce contract awards and modifications.

- *Defense Subsistence Offices (DSO) Order System:* We will provide electronic ordering capability to the DSO to reduce order transmission times and other components of procurement administrative lead time for fresh fruits, vegetables, and chilled and frozen products.

Implementation Strategies

Our strategies for implementing EC/EDI in subsistence focus on rapid-payoff efforts (less than 24 months) that will produce maximum return on our investment. To meet that requirement, our projects focus on improvements in worker productivity, lower prices, and improved product quality. We will evaluate each EDI project according to its ability to influence or improve the following factors:

- Customer and supplier inventory levels

- Electronic and administrative transaction processing costs

- Vendor-delivered prices

- Product range and availability

- Delivery time from order to delivery at POS

- Completeness, accuracy, and timeliness of catalog product information.

Using the above criteria, we conclude that projects in the following areas (ranked highest to lowest) will produce the highest ROI:

- Dry goods (processed fruits and vegetables and general-purpose items)

- Cold storage (fresh fruits and vegetables and chilled and frozen items)

- Brand name products

- Meat, dairy and bakery products.

Preliminary evaluation of our EC initiatives shows that the following actions most dramatically shorten cycle time, improve responsiveness, and reduce delivered costs of products and thus are the most desirable:

- Electronic cataloging initiatives, which allow customers access to timely decision-support information and rapid movement to take advantage of product pricing dynamics

- Quick replenishment and electronic ordering initiatives, which will reduce overall cycle times and inventory levels

- Consumption and sales tracking

- Invoice collection and payment capabilities such as EFT.

Implementation Issues

Significant obstacles exist to the creation of our future EC/EDI environment. They include the following:

- *Cost-benefit analysis and resourcing:* Many of the business changes we intend to make are intuitively beneficial. Paper-based processes and our traditional compartmentalization of functions, for instance, are inherently less efficient and effective than those that we intend to achieve. As we compete for resources with other business units, however, we will need to quantify those visions so that they can be compared and evaluated objectively. That quantification must be performed prior to major resource decisions so that — and

those with funding — can be certain that resources are being allocated to provide the highest possible return on investment.

♦ *Standardization:* While the use of standard EDI transaction sets offers dramatic improvements in the interoperability and communications capability between us and our trading partners, significant work still remains to establish those transactions as implementation agreements between trading partners. Once we define the individual transactions to be used, we must still map our data to the EDI data requirements and then translate those data for use in the EDI transaction set. This part of the EC process remains a largely handcrafted one although powerful tools exist to support the automation of mapping and translation. With the emergence of commercial systems that push the capabilities of these tools to new levels, we must use them to reduce the time it takes to exchange information with our trading partners.

♦ *Internal organization:* The full implementation of EC throughout subsistence requires significant analysis of existing organizational structures and management processes. As we distribute information to the desktops of our people, we must empower our people to make business decisions that were previously reserved for management.

♦ *External technical support:* We are concerned with the quality and the responsiveness of the technical support we receive. Currently, we receive that support from the Defense Information Systems Agency (DISA) [(formerly the DPSC Information Processing Center (IPC)]. That organization is the lates; manifestation of an organization that has changed ownership three times in the past 2 years. As DoD moves to close individual processing centers and consolidate them into "megacomputing centers," we are quite concerned that we will have little or no control of our support. We are also concerned that the rapid decentralization of information off mainframe and minicomputer platforms down to personal computers on workers' desks is creating a support requirement that DISA is not prepared to provide.

♦ *Laws and regulations:* The Subsistence Directorate, like other government agencies, must operate within the constraints of laws and regulations governing our processes and actions. We must deal with two areas, in particular, most carefully:

▶ By law, we must favor small business, but our new EC business practices rely on new approaches to acquisition and industry relations that may at first appear to be threatening to that community. In our new EC environment we anticipate stable, long-term business relationships, indefinite delivery quantities and order times, and "best value" contract award approaches. Some small businesses may not be able to invest in the technology to support EC.

▶ Longer contract periods enabled by the indefinite-delivery quantity contracts may limit price competition. The employment of such

contracting techniques as bid alternate evaluations or multiple-award contracts may serve to address this concern.

CONCLUSION: ELECTRONIC COMMERCE AS A PATH TO THE FUTURE

The next decade is certain to be one of massive change for each of our business units. As military missions and budgets continue to change rapidly, we are determined to position ourselves in the vanguard of defense logistics support and to act as a leader in each of the industries in which we do business. Information technologies are the key to our success and the primary means of achieving a competitive advantage.

Glossary

ANSI	=	American National Standards Institute
ASC	=	Accredited Standards Committee
CALS	=	Computer-aided Acquisition and Logistic Support
CBL	=	Commercial Bill of Lading
CECO	=	Corporate Electronic Commerce Office
CIM	=	Corporate Information Management
DBOF	=	Defense Business Operations Fund
DD	=	Defense Department
DeCA	=	Defense Commissary Agency
DFARS	=	Defense Federal Acquisition Regulation Supplement
DFAS-CO	=	Defense Finance and Accounting Service — Columbus Center
DISA	=	Defense Information Systems Agency
DITSO	=	Defense Information Technology Services Office
DLA	=	Defense Logistics Agency
DLMS	=	Defense Logistics Management System
DLSS	=	Defense Logistics Standard Systems
DMR	=	Defense Management Review
DMRD	=	Defense Management Report Decision
DPSC	=	Defense Personnel Support Center
DSMS	=	Defense Subsistence Management System
DSO	=	Defense Subsistence Office
EC	=	Electronic Commerce

EDI = Electronic Data Interchange

EFT = Electronic Funds Transfer

e-mail = electronic mail

FAR = Federal Acquisition Regulation

GBL = Government Bill of Lading

GEIS = General Electric Information Services

IPC = Information Processing Center

MECA = Medical Electronic Customer Assistance

MILSTRIP = Military Standard Requisitioning and Issue Procedures

MODELS = Modernization of Defense Logistics Standard Systems

MT = Military Traffic

NSN = National Stock Number

OST = Order and Ship Time

POC = Point of Contact

POS = Point of Sale

QR = Quick Response

RIC = Recruit Induction Center

ROD = Report of Discrepancy

ROI = Return on Investment

SAMMS = Standard Automated Materiel Management System

SPEDE = (SAMMS) Procurement by Electronic Data Exchange

SAV = Standard Aviation Systems Command

SF = Standard Form

TQM = Total Quality Management

UCC	=	Uniform Code Council
UCS	=	Uniform Communication Standard
VAN	=	Value-Added Network
VICS	=	Voluntary Interindustry Communications Standard
WINS	=	Warehouse Information Network Standards

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13. ABSTRACT (Maximum 200 words)

This report provides the Defense Personnel Support Center with a strategic plan for replacing its current, paper intensive business practices with faster, less expensive and far more accurate electronic commerce business methods that use Electronic Data Interchange standards. As a context for that action, the plan describes DPSC's current business environment and its vision for how it will conduct business in the future. The plan delineates management responsibilities, establishes a plan of action and milestones, and describes ongoing electronic commerce projects at the corporate and business unit level.

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